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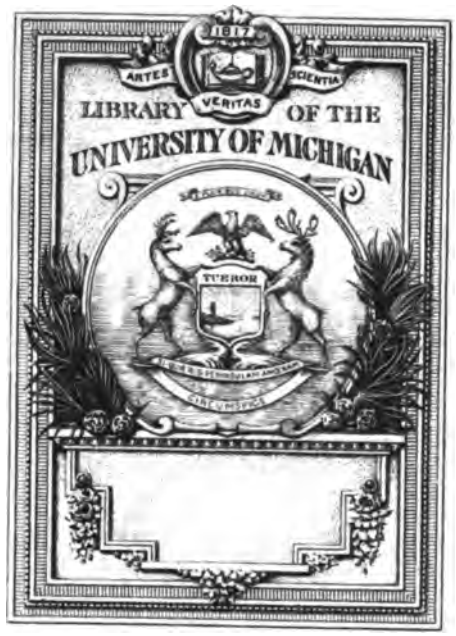

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INSTITUTE FOR RESEARCH IN LAND ECONOMICS

Urban Land Economics

LECTURES BY

Professor Michael Rostovtzeff
Dr. Mary L. Shine
Professor R. H. Whitbeck
Dr. G. B. L. Arner

WITH AN INTRODUCTION BY

Dr. Richard T. Ely, Director

"Under All, The Land"

"My own conviction has long been that the land question far transcends any restricted field of economics and that it is fundamental to national survival and national welfare. It is truly a problem calling for statemanship of the broadest type."

—Professor Frank A. Fetter

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In collection
Land economics
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FOR THE
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Edwards Brothers, Publishers
Ann Arbor, Mich.

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INSTITUTE FOR RESEARCH IN LAND ECONOMICS

URBAN LAND ECONOMICS

Introduction

by

Richard T. Ely, Ph. D., LL. D.

Director, Institute for
Research in Land Economics
and
Professor of Economics,
University of Wisconsin

"UNDER ALL, THE LAND"

"My own conviction has long been that the land question far transcends any restricted field of economics and that it is fundamental to national survival and national welfare. It is truly a problem calling for statesmanship of the broadest type." - Professor Frank A. Fetter.

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URBAN LAND ECONOMICS

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At a meeting of the full Board of Trustees of the Institute for Research in Land Economics and Public Utilities, held in New York City, July 11, 1922, the Board was organized as follows:

Dr. Albert Shaw, President.
Editor, Review of Reviews.

Justice M. B. Rosenberry, Vice President and Treasurer. Supreme Court of Wisconsin.

Dr. Henry C. Taylor, Secretary,
Chief, Bureau of Argicultural Economics,
United States Department of Agriculture.

Dr. Richard T. Ely, Director of the Institute.
Professor of Economics, University of Wisconsin.

Dr. John H. Finley.
New York Times.

Colonel Henry S. Graves.
Director, The School of Forestry,
Yale University.

W. S. Kies,
Aldred and Company, New York City.

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URBAN LAND ECONOMICS

Introduction

by

Richard T. Ely

For the first time a course is now being given in Urban Land Economics. When one considers how fundamental this subject is, it seems strange, indeed, and almost incredible. Nevertheless it is in harmony with a very general development of different scientific subjects. Adam Smith long ago called attention to the fact that the strange and unfamiliar first attracts scientific attention. Astronomy long precedes economics.

It is believed that we cannot solve satisfactorily our various urban problems, including the housing problems so much discussed now, unless we approach them from the point of view of the land. It is the purpose of the Institute for Research in Land Economics to develop land economics in its various phases as essential for the scientific comprehension and the practical solution of economic problems. We take as a brief motto the words of Mr. Forrest Crissey, "Under all, the Land," and as a longer motto these words of Professor Frank A. Fetter of Princeton University:

> My own conviction has long been that the land question far transcends any restricted field of economics and that it is fundamental to national survival and national welfare. It is truly a problem calling for statesmanship of the broadest type.

Last summer in the Adirondacks I worked out the following outline for the course in Urban Land Economics as announced for the second semester of the present year, to be given by myself in coöperation with Assistant Professor Martin G. Glaeser.

URBAN LAND ECONOMICS

as outlined by

Richard T. Ely

I. LAND SELECTION AND UTILIZATION

A. THE URBAN SITE

Different causes operate to determine this, depending upon stages reached in economic evolution and the social and economic conditions, obtaining in these stages.

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1. The capital as the seat of ecclesiastical and political authority. Cairo, Jerusalem, Babylon, Nineveh, Athens, Rome.

2. Early commercial cities. Sodom, Gomorrah, Carthage.

3. Modern cities with an unbroken history reaching back to the Middle Ages. London, Paris, Berlin.
The causes of their survival and growth.
Vienna and its peculiar position.

4. Economic considerations continually increasing in their power over urban locations.

5. Military considerations and urban land.
In earlier ages and at the present time.
The old walls and their removal, utilization of land thus freed. Ulm. Vienna and the Ring Strasse.

6. Man's increasing power over nature as seen in urban site selections and urban land utilization.
Advancing stages in transport and communication. The wheel barrow and man's back (China); animal power; boat transportation by rowing, Triremes, etc. Sails and the power of the wind; the canals and animal power. Now other motor power: steam power; auto-motors; aeroplanes.
Man's increasing power seen in the expansion of the urban area. Zones of expansion and concentration and intermediate zones. Growth and decay of cities as a result.

B. SELECTION OF LAND WITHIN THE CITY

1. With respect to purpose; areas for transport and communication. Harbor and shore lands.
Land used for commerce; for manufactures and for residences.
Residential land classes and variation in standards in different countries and places.
Aristocratic classes - palaces.
Areas for public buildings.
Collective and individual selection. Control by public authority, by restricted use in deeds and by associations. Public opinion and its limits. Racial influences and land selection and land values. The negroes.

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II. LAND VALUES

A. HISTORICAL RETROSPECT

What is known about early land values?
(Rostovtzeff-Westerman)
Mediaeval land values.

B. CONTEMPORARY LAND VALUES.

1. R.M. Hurd's book. King's monograph. Rent and Values. King's formulas (V. his article on the Building Prospect in the Architectural Record, May, 1921).

2. Peace and prosperity - Degrees of stability of values and its importance for the general welfare.

3. Land planning and the control of values.

4. Growth of population and land values.

5. In general, forces tending to increase and decrease land values; commerce, industry, beauty, fashion.

Growing wealth and land values.
The classical theories and Henry George; the test of experience.

C. EARNED AND UNEARNED INCREMENTS IN VALUES AND ALSO DECREMENTS

III. PUBLIC UTILITIES AND URBAN LANDS

The land occupied by public utilities and payments into the public treasury made by public utilities. Relation of these payments to rent and to taxation.

IV. CITY PLANNING AND ITS RELATION TO URBAN LAND PROBLEMS

Land Planning can almost be said to be the very heart of urban land problems. (V. Aronovici's book on City Planning and many others; especially reports by John Nolen)

V. TAXATION OF URBAN LANDS

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VI. ENLARGMENT OF THE URBAN AREA

A. BY PUBLIC ACTION

B. BY PRIVATE ACTION

1. Under laissez faire.

2. Under control.

VII. URBAN LAND AND CONDEMNATION

Its principles and its purposes.

VIII. URBAN LAND AND THE HOUSING PROBLEM

A. TENANCY AND HOME OWNERSHIP

B. THE HOUSING SHORTAGE

Proposed solutions; single tax; the Calder Bill; Building and Loan Associations; construction by public authority and at public expense; construction by realty companies and speculative building; individual construction.

IX. CITIES AND AGRICULTURE

A. AGRICULTURAL PRODUCTION WITHIN URBAN AREAS

The significance of this production in back lots, larger gardens connected with the home and vacant lots. War gardens and vacant lots. A reserve and an anchor to the windward. The utilization of otherwise unoccupied labor-time in garden production within the cities. Did the "War Gardens" save the situation during the World War?

B. THE CITIES AS A STIMULUS AND A MARKET FOR AGRICULTURE

C. THE CITIES AS RESIDENCES OF THE AGRICULTURAL POPULATION

1. Those actively engaged in agriculture.

2. Retired farmers and their problems.

X. URBAN LAND AS AN INVESTMENT

Various kinds of urban land investment; purchase and mortgage.

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A. AS AN INVESTMENT FOR PUBLIC AND QUASI-PUBLIC BODIES AND INSTITUTIONS: AS STATES, CITIES, COLLEGES, HOSPITALS, ETC. THE ENGLISH COLLEGES AND COLUMBIA COLLEGE AS LANDOWNERS.

B. PRIVATE PURPOSES

1. Trusteeships as in Boston; estates and their growth; the bearing of these developments on the fluidity of property (perpetuities - the dead hand, etc.)

2. Individual investments, suitability for various economic and social classes.

XI. THE OWNERSHIP OF URBAN LAND

A. INDIVIDUAL OWNERSHIP

B. COLLECTIVE OWNERSHIP

1. Private Corporations

2. Quasi-public bodies, including religious, charitable and educational institutions.

3. Public ownership.

C. THE FACTS AND THEIR SIGNIFICANCE

The trend of evolution.

After this had been outlined, discussions with Professor Michael Rostovtzeff led me to invite him to give a brief course of lectures on cities in the ancient world as a general introduction. A presentation which he gave of large land holdings in the ancient world before the Land Problems Seminar during the preceding academic year had shown his interest in this subject and his large knowledge of it. His lectures are given as delivered. This is the first time the ground has been covered and Professor Rostovtzeff found it much more difficult than he supposed to gather together the needed information. This simply emphasizes the fact, already alluded to, that the field is a new one. Incidentally it may be mentioned that a learned monograph by Professor Rostovzeff on "A Large Estate in Egypt in the Third Century B.C." has just been published as one of the University of Wisconsin Studies in the Social Sciences and History.

Fortunately architects are beginning to appreciate the fact that city planning and housing must be approached from the point of view of land economics. This has been admirably brought out in an article by Architect George Herbert Gray, in the Journal of the

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American Institute of Architects for October, 1921. If we are to solve the housing problem we must know something about the various proportions in which the different elements of cost enter into the value of the houses to be constructed. The following is quoted from Mr. Gray and it will be seen that the facts, if he is correct, are not what a good many suppose them to be. "Rent includes not only the capitalization of the ground and buildings themselves, but general maintenance, insurance, obsoleseence, commonly figured at about 40 per cent, leaving 60 per cent for the cost of building and ground. These figures give the following results:

Rent	= 100 per cent
Proportion of rent due to cost of building and grounds	= 60 per cent (Less maintenance, etc.)
Land and utilities	= 1/5 of Buildings and Grounds, or 12 per cent
Raw Land	= 1/2 of Land and Utilities or 6 per cent

These are only approximate average figures but close enough to make it evident that the raw land is not, under normal conditions, a factor of major importance in residential properties."

Let us take the question of tax exemption in which at least a partial solution has been attempted in New York City. Tax exemption comes under the general head of the taxation of real estate and before a satisfactory answer can be given to the problems involved in tax exemption we must examine the whole subject of taxation of land and put it in its proper place in the system of taxation.

The question of zoning as part of the whole problem of city planning finds its proper place and its relations in urban land economics.

Fundamental in scientific work and practical plans in urban land economics is the question of the movement of urban land values. So far as I am aware the first serious study of this subject ever undertaken is that which has been conducted by Dr. G.B.L. Arner, whose lectures under the auspices of the Institute for Reaearch in Land Economics were given as a part of the work on urban land economics.[1] They constitute one of the most valuable parts of the present volume. It is, however, only just to state that this work was done under the auspices of a committee formed and financed by Mr. Alexander M. Bing of New York City. The Committee included the following members: Alexander M. Bing, Richard S. Childs, Clarence Stein, Robert D. Kohn, Lawson Purdy, Frederick L. Ackerman, Robert Murray Haig, Graham R. Taylor, Robert E. Simon, Herbert S. Swann, and

---

[1]An account of Dr. Arner's researches may be found in the Quarterly Journal of Economics, for August, 1922.

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C.H. Whitaker. Nobody assumes responsibility for these results except Dr. Arner. They were conducted in the finest scientific spirit and so far as getting preconceived results are concerned, the conclusions naturally drawn were quite different from those anticipated either by Mr. Bing or Dr. Arner.

As the subject is so new and as this volume doubtless will reach many who are not familiar with the general plans and work being conducted under the auspices of the Institute for Research in Land Economics and of the University of Wisconsin, it is natural to suppose that the readers will desire to know the place that urban land economics occupies in the general work in land economics and to know what we understand by land economics.

> Land Economics is that division of economics theoretical and applied, which is concerned with the land as an economic concept and with the economic relations which grow out of land as property.
>
> As science, land economics seeks the truth for its own sake. It aims to understand present facts pertaining to land ownership in all their human relationships, to explain their development in the past, and to discover present tendencies of growth. As an art, it aims to frame constructive policies for particular places and times.
>
> A land policy takes as a starting point the existing situation with respect to the land, land as here used being equivalent to all the natural resources of the country. It examines the processes of evolution by which the existing situation has been reached and proceeds to develop a conscious program of social control with respect to the acquisition, ownership, conservation and uses of the land of the country and also with respect to the human relations arising out of the use and ownership.

The basic work in the series of volumes called Outlines of Land Economics, is to be brought out in three volumes this autumn in mimeographed form by Edwards Brothers of Ann Arbor, Michigan, who are bringing out this present work. The scope of the work is indicated by the table of contents, This is, however, tentative and may be slightly changed in a few particulars.

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Characteristics and Classification of Land

Volume I

of

OUTLINES OF LAND ECONOMICS

Chapter I.	Land Economics, Defined and Described
Chapter II.	Property, Defined and Described; The Economic Significance of Property-Relations
Chapter III.	Land Defined: Its Characteristics and Peculiarities
Chapter IV.	The Characteristics and Peculiarities of Capital Contrasted with the Characteristics and Peculiarities of Land
Chapter V.	Land Classification
Chapter VI.	Land Utilization
Chapter VII.	Qualitative Order of Land Utilization
Chapter VIII.	Possibilities of Increasing the Economic Supply of Land
Chapter IX.	Agricultural Land
Chapter X.	Range and Ranch Land
Chapter XI.	Forest Land
Chapter XII.	Mineral Land
Chapter XIII.	Ownership of Water
Chapter XIV.	Shore Lands and Riparian Rights
Chapter XV.	Land Beneath the Water
Chapter XVI.	Public Utility Land
Chapter XVII.	Urban Land

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Costs and Income in Land Utilization

Volume II

of

OUTLINES OF LAND ECONOMICS

Chapter I.	Introduction - The Term Rent
Chapter II.	Rent and Surplus
Chapter III.	The Emerging Costs in Land Utilization
Chapter IV.	The Margins of Production
Chapter V.	Elements in Land Income
Chapter VI.	Factors that do not enter into Land Income
Chapter VII.	Land Income and Land Value
Chapter VIII.	Land Income and the Various Kinds of Land
Chapter IX.	Urban Rents
Chapter X.	Water Rents and Public Utility Land Rents
Chapter XI.	Land Income as Determined by Custom, Competition and Monopoly,
Chapter XII.	The Socialization of Rent
Appendix:	Land Values in New York City

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Land Policies

Volume III

of

OUTLINES OF LAND ECONOMICS

Chapter I.	Land Settlement and Home Ownership - A General Survey
Chapter II.	Land Holdings
Chapter III.	Tenancy and Ownership of Land
Chapter IV.	Leasehold vs. Freehold
Chapter V.	Land Credit
Chapter VI.	The Taxation of Land
Chapter VII.	The Land Business
Chapter VIII.	Land Policies and the World's Food Supply
Chapter IX.	A National Policy for Land Utilization

Appendix:

Chapter I.	Private Colonization of Land
Chapter II.	Speculation in Land
Chapter III.	Luck and Chance in Success and Failure
Chapter IV.	Conservation and Economic Theory
Chapter V.	Points to be Considered in Investigations of Landed Property

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Books have been published on many of the topics which fall within the scope of land economics, but they have appeared to lack close relationship with one another. This idea of land economics places these works in their proper relations to each other, and gives them a unity which it is believed will be helpful scientifically and practically. It is hoped that it will very greatly broaden out the interest in the subjects that fall within our field. Economic students of land problems have too generally failed to appreciate the fact that land planning, both urban and agricultural, is absolutely essential to their solution. On the other hand, city planners have too generally failed to appreciate that fundamentally their work must be based upon economics. Land economics, then, as a concept opens up a great practical and scientific field.

Urban land economics, it will then be seen, is simply a development of one chapter or division (using the more general term) of the Outlines of Land Economics. Economics of Forestry is the development of another division of the general field. The Outlines of Land Economics corresponds precisely to the Outlines of Economics as a general treatise. The Outlines of Economics surveys the general field, but many of the larger topics have been developed into independent treatises. Money, banking, railways, etc. afford illustrations. Similarly, we are developing the several topics covered by the Outlines of Land Economics. All this may be made clearer by the following list of books for which more or less definite plans have already been made.

1. Agricultural Economics - H.C. Taylor(1)
2. Economics of Forest Land - Henry S. Graves(3)
3. Characteristics and Classification of Land, Volume I in Outlines of Land Economics - Richard T. Ely(2)
4. Costs and Income in Land Utilization, Volume II in Outlines of Land Economics - Richard T. Ely(2)
5. Land Policies, Volume III in Outlines of Land Economics - Richard T. Ely(2)
6. The Taxation of Land - Richard T. Ely(3)
7. Marketing of Farm Products - Theodore Macklin(1)
8. Cooperative Marketing Organization - Theodore Macklin(3)

---

(1) Already published
(2) In press
(3) In actual preparation.

In cases where no name is stated, arrangements with the authors have not been completed. Announcement of the names of the writers will be made later.

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9. Economics of Marketing.

10. The Marketing of Whole Milk - H.E. Erdman(1)

11. Economics of Mineral Lands(3) - John E. Orchard

12. Economics of Coal(3) - John E. Orchard

13. Irrigation Institutions - Elwood Mead(3)

14. Rural Sociology - C.J. Galpin(3)

15. Land Utilization(3)

16. Range and Ranch Land(3)

17. History of Federal Land Policies - B.H. Hibbard(3)

18. Land Valuation

19. Urban Land Policies - Richard T. Ely and Associates(3)

20. Introduction to Agricultural Economics - L.C. Gray(2)

21. Economics of Water Resources

22. The Ownership and Tenancy of Agricultural Land - B.H. Hibbard and G.S. Wehrwein(3)

23. The Marketing of Manufactured Products(3)

24. The Single Tax - F.B. Garver(3)

25. The Real Estate Business as a Profession - Richard T. Ely and Associates(3)

26. Land and Credit(3)

27. Farm Organization(3)

28. Agricultural Cooperation(3)

29. Farm Bookkeeping(3)

30. The Law of City Planning and Zoning - Frank B. Williams(1)

31. Special Assessments(3)

32. Land Problems of Planning

33. Frontier Finance in the United States

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34. Land Values in the Cotton States

35. Land Values in the Grain States

36. Urban Land Economics - Richard T. Ely and Associates(2)

In addition to the lectures which are in mimeographed form constituting the present volume other lectures were planned as follows:

Cities and Agriculture

Agricultural production within cities - George S. Wehrwein.
Cities as residences of agricultural population - B.H. Hibbard
Cities as stimulus and market for agriculture - Theodore Macklin

Public Utilities - M.G. Glaeser

Condemnation - M.G. Glaeser

City Planning - M.G. Glaeser

Enlargement of City Areas - M.G. Glaeser

Housing - M.G. Glaeser

Taxation of Land - H.B. Dorau

Land Ownership - Richard T. Ely[1]
Individual
Collective
The facts and their trend

Urban Land as an Investment - Richard T. Ely

Conclusion - Richard T. Ely

---

(1) For a variety of reasons the lectures I had planned for myself had to be condensed into a brief survey at the close of the course. One of the principal reasons was to give opportunity to the other participants in the course, as they required nearly all the too brief periods, two hours a week, set aside for this course. In addition to two hours a week for lectures, one hour was given to quizzes conducted by my associate, Mr. Glaeser.

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It seemed desirable to cast about and see what resources we had for this work. While I have been much gratified to find how rich these resources are and feel well pleased with this first attempt in a course in urban land economics, the course will be quite different as given hereafter and will be more unified. This statement is simply made to explain to those interested what is planned for the future. Pedagogically a course divided among so many different people is not sound as a permanent arrangement, but it has proved helpful under the existing circumstances. It is quite possible that as time goes on, two or three different courses may develop out of this one course in urban land economics. May I take this opportunity to express my warm appreciation of the cordial coöperation I have received from those who have participated in this course.

The place and significance of the present work will be made still clearer by some further information about the Institute for Research in Land Economics, in which the needs for investigation is emphasized.

The Institute for Research in Land Economics was founded in October, 1920. It has a staff of resident research workers and has the coöperation of a number of professors in universities and agricultural colleges, and members of federal and state departments of agriculture. A group of mature and experienced graduate students has joined in its studies. The Institute has begun a number of investigations, and will, as it expands, take up others for which the need is great.

We are face to face with the gravest economic problems arising out of landed property - problems that lie at the very foundation of our economic life; and when we turn to economic treatises we find little to help us in their solution.

Thoughtful men of affairs must realize the significance of landed property and all the arrangements that are connected with it as soon as these things are called seriously to their attention. Some of them already show an appreciation of what land questions mean for the future of civilization. Especially significant is the following quotation from the late James J. Hill, whose greatness and experience in developing a vast inland empire entitle his words to careful consideration.

> Land without population is a wilderness and population without land is a mob. The United States has many social, political, and economic questions - some old, some new - to settle in the near future; but none so fundamental as the true relation of the land to the national life. The first act in the progress of any civilization is to provide homes for those who desire to sit under their own vine and fig trees. A prosperous agricultural interest is to a nation what good digestion is to a man.

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This relationship of the land to the national life is a question of property when we reach its heart, and all investigations of land problems which do not find their center in the institutions of property must be superficial and unsatisfactory, leading to no permanent solutions.

Staff and Work in Progress.

Members	Present Subject of Research
Richard T. Ely	Outlines of Land Economics Urban Land Economics The Taxation of Land
B. H. Hibbard	Tenancy
	History of Federal Land Policies
F.L. Paxson	Land Problems of the American Frontier
M. Rostovtzeff	Land Problems in the Ancient World
M.G. Glaeser	Public Utility Lands Shore Lands
H.B. Dorau	Public Utilities The Taxation of Land
A.J. Altmeyer	Statistics Special Assessments Relation of Land Values to Public Expenditures
O.E. Baker	Land Utilization
G.S. Wehrwein	Large Land Holdings Farm Tenancy Public Land Policies
Dr. G.B.L. Arner	Urban Land Values
Mary L. Shine	The Leasehold vs. The Freehold. Instances of Attempts to establish the leasehold system in the United States
	Ideas of the Founders of the American Nation on Landed Property
	Bibliography for Land Economics
D.D. Lescohier	Land and Labor Agricultural Labor
Clara F. Wigder	Secretary and Research Assistant

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The character of the Institute is further indicated by the Board of Trustees, which consists of the following gentlemen:

Justice M.B. Rosenberry (Supreme Court of Wisconsin) President of the Board of Trustees

Richard T. Ely (Professor of Economics, University of Wisconsin) Director of Research

John H. Finley (Late Commissioner of Education of the State of New York and President of the University of the State of New York. Now of the editorial department of the New York times)

Colonel Henry S. Graves (Ex-Chief of the United States Forest Service)

Henry C. Taylor (Chief, Bureau of Agricultural Economics, United States Department of Agriculture)

W.S. Kies (Banker, Aldred and Company, New York City)

Albert Shaw, (Editor, The American Review of Reviews)

Finally, it may be said that the Institute for Research in Land Economics has no private aims. All the funds which are received are devoted to its work just as in the case of an endowed university.

Richard T. Ely

Director, Institute for Research in Land Economics

Madison, Wisconsin,
May 15, 1922.

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INSTITUTE FOR RESEARCH IN LAND ECONOMICS

URBAN LAND ECONOMICS

Cities in the Ancient World

by

Michael I. Rostovtzeff, LL. D., Litt. D.

Professor of History,
University of Wisconsin.

"UNDER ALL, THE LAND"

"My own conviction has long been that the land question far transcends any restricted field of economics and that it is fundamental to national survival and national welfare. It is truly a problem calling for statesmanship of the broadest type." - Professor Frank A. Fetter.

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Lecture I. February 7, 1922.

The Prehistoric Cities and the Cities of the Ancient Orient.

Professor Rostovtzeff: Professor Ely, Ladies and Gentlemen:

I do not know whether or not my course will be on land economics, but it will be on economic and social conditions, that is sure. Now, what is my purpose in giving this short introduction to your work? It is to interpret one of the main problems of modern economic and social life. I do not know if you, being Americans, grasp entirely the importance of this problem; but I, being a Russian, grasp it fully and entirely. Now you will ask, "Why?" I will tell you. The problem I mean is the problem produced by the existence in our social life of two different types of men, the country people and the city people. Of course, these two types exist in this country also, but, as far as I know, there is no such sharp antagonism, so sharp a contrast between these two types as there is, for example, in Russia and to a lesser extent in Western Europe.

If you think of what is happening now in Russia you will find that the main thing is just this contrast between the country population - the peasants - and the city population, which comes in very sharp crises of Russian life. There is, you see, a kind of suspicion and hatred which the country population, the peasants, feel toward the city population. They think that the city population are parasites, living at their, the peasants', expense; and at the same time that the city people are living at the peasants' expense, they are the masters and rulers, they decide the political and social conduct.

Such is the situation in Russia. It was in formation for centuries; it is not a thing which was formed during the last few years. Beginning with the earliest periods in the history of Russia, this contrast was in formation, and the outbreaks and the revolts of the peasants against the cities are, in Russia, as old as the 15th and 16th centuries. Now, is such a rivalry, such an antagonism, confined to Russia? No! Here in America it is less marked, although the economic interests of the country population do not coincide with the economic life of the city population. You see it just now in Western Europe. If you take, for example, Germany with her large population of peasants; if you take such countries as Austria and the new countries that formerly formed a part of Austria; and partly what was a part of Turkey, like Roumania; if you take France - I do not speak of England, where the contrast is not so marked - you will see that there is the same contrast, there are the same two types. Now, if you look at our civilization as our civilization was formed, you must say that it is a city civilization. It was formed in and by city people. Everything which was new in our civilization was first started in the city and gradually and very slowly spread to the country parts of the land.

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What is the origin of this contrast which cannot be denied? The origin of this contrast, like the origin of our civilization in general, lies in the ancient world. And, one of the main causes, as I will show you later, of the decay of the ancient world was a process which was very much like the process which now is going on in Russia. This contrast between city and country population, this hatred between the two classes existed and the war was waged and organized by the country against the city population, especially in the third century A. D. Afterward the Roman Empire and later the Byzantine Empire based its power on the peasant class. But the Roman civilization will be the special subject of my last lecture.

What are the origins of this contrast and this antagonism? What are the origins of cities and why in the ancient world, as you see it depicted by our literary, our documentary evidence, is this ancient world a world of cities? If you read - read every ancient writer you like - you will find that life, really civilized life, was a city life. They did not think of themselves as living outside and not in close connection with the city. You have some idyllic tendencies, people looking toward the country, but these are few in Greek and Roman times. But life in the country is not life. Life and city are identical. If you take the Roman Empire and the Hellenistic monarchies and even the Greek world from the point of view of political, social and economic life, you will see there an agglomeration of cities.

What is the origin of the conditions which are very near to modern conditions, where cities are growing in importance and land and country are retreating, just as you see, to the background, but remaining at the same time the real economic background of existence of cities. Now, the cities naturally rule, dictate to the country, and the country usually obeys the orders. If they do not, Russian conditions come out - revolt and civil war.

When Professor Ely was kind enough to invite me to give you my introduction to the course in urban land economics, I thought my task was an easy one. I would place a textbook in your hands and I would give you my comments on the text book. Great was my astonishment when I saw that no textbook of this kind exists, and not only that no textbook exists but even that no serious research was ever done in this line. So what I am giving you is entirely my own and my own ideas, my own arrangement of material, and my own scale of evolution. That is why I cannot tell you what textbook you could take to help yourselves in following my course. Of course every textbook on ancient history would do, but that is only the background. You will find almost no word of what I have told you. Very little about political and social conditions. Wars are about all. But as a background of what I am going to tell you, of course every book on ancient history would do. The best one, so far as I know, is the book of Professor Breasted of Chicago, Ancient Times, because he pays much more attention than anyone else to the development of civilization in the ancient world. But I have no book to name which would take the political and

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social conditions into consideration, which is one of the most important bases of development of historical evolution. So you see what I am giving you is my own coördination of existing material. Of course, there is no lack of material. There is plenty. On one hand we have the ancient writers; on the other hand we have thousands of official documents, thousands and thousands of documents of a private nature, contracts, leasehold contracts, and sale contracts; everything that you have in modern life is represented among the documents of the ancient world and in the oriental, Babylonian, and Egyptian civilization. You have finally the result of years and years of archaeological investigation and excavations which first made us acquainted with the city, not as described by someone, but as it was. Just imagine what would happen if Madison and all the other cities of America would decay in the same way, and after 2,000 years someone would come and excavate and find cities still having buildings left, but with the inhabitants gone, not exterminated at once, but having died out gradually. Now just imagine that such an accident as the eruption of a volcano, Vesuvius, would bury a large flourishing city with all the houses, temples, etc., etc., and that you would excavate it again. Would you not get a real, vivid, lovely picture of what the city was? So I would say that archaeological material is one of the most important for making our ideas of the ancient cities clear and precise, and that is why I am going to use very much the archaeological material, and that is why I organized my lectures in this way. In one lecture hour I will give a talk and the next lecture hour I will give you pictures illustrating the talk of the foregoing lecture.

Let me now come to my own subject in this introduction. Of course I cannot tell you what century it was when the first cities appeared, but I can tell you approximately that as long as mankind existed and as long as men were living not as individuals or in quite small groups, as long as the social life had its first start, some attempts at creating cities existed. The first groups of men living together in one place and having a social life of the group is just a city. Because what do we mean by city? First of all, an agglomeration of men living in any one place, and second, and that was more important in the ancient world, that this group was a unit from the social, the economic, and especially the political point of view. Now, the origin of such a group, social, economic and political group, is as old as, I should say, the paleolithic age, when men did not know anything about the metals and they did not know how to polish the stones which were used as tools. At this time archaeologists have already discovered large cave cities, cities consisting of scores and sometimes hundreds of caves cut into the rock or into a bank of a river. It is interesting that such cave cities still exist and in great quantities. You have some such cave cities in Asia Minor, and Strabo, a contemporary of the Emperor Augustus, who lived in the first century B.C., and the first century A.D., gave a vivid description of such cities. I myself visited such cities in the Crimea. They are an outstanding feature of some of

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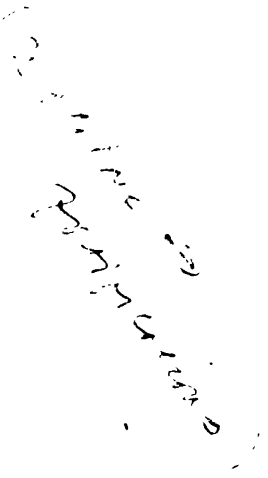

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the Crimean ancient dwellings. These were used in the prehistoric time and again they are used as living rooms by the inhabitants, but their origin is prehistoric.

The more elaborate forms of villages and cities, because there is no real difference as yet between the village and the city, appear in the neolithic age. In the neolithic period you already have more elaborate types of group dwellings, of cities, and of villages. I will show you next time some slides illustrating the different types of these dwellings.

The most important forms are, first, the lake dwellings; second, the reproduction of the pile or lake dwellings on dry land; third, villages protected by walls not yet made of stone but of earth. These last villages were of two types. The first are villages which were refuges on tops of mountains for the population which lived around this refuge and larger villages mostly in the plain which included many houses and were surrounded by a strong wall, where people lived with their cattle and had gardens inside the wall. The second type of large villages were not only dwelling places, but economic centers of agriculture, and they are mostly characteristic for central Europe and especially for the Slavs, the Germans and, partly, the Celts, although the Celts know more of the city as a refuge. A new type derived from these villages was a city as a center of a real state, with a king at the head of the state, the residence of this king being the center of the city and dominating the country which lay around the city. This new type of city is the evolution of the city refuge and I will speak of it later on.

What is the leading feature, the leading cause, which brought people to build such cities? If you look at the cities as such you will see that the leading features are the fortifications. The cities were built first of all to protect the population from wild beasts and from the neighboring men, as, for example, the lake dwellings. These are large villages built on piles in lakes very far from shore. They are connected with the land by means of wooden bridges, sometimes very long, which could be taken away at the first alarm. The reproduction of these large dwellings on dry land was dictated by the same considerations. The terramare in Italy (so called because later on when the city decayed, the places of these cities, the mounds, consisted of black earth and black earth means in Italian terra marna) are just remains of cities built in imitation of lake dwellings. Probably a population which was used to life in lakes came to Italy, found no lakes, and imitated, for protection, the lake dwellings. The same leading feature is characteristic for the other villages of the neolithic and of the early metal ages: the villages of the neolithic age, so far as we know, are all fortified. I know of no one which was not fortified. Such are the prehistoric beginnings.

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But you know that prehistoric life was transferred into historical life in the Near East and especially in two places: the first is Egypt, the second, Mesopotamia. These countries are similar from the geological and economic points of view; both have big rivers, and very rich alluvial soil. In the very beginnings life developed here just as it did in other parts of Asia and Europe. There are here the same fortified villages as the earliest dwelling places of men. However, in the ancient orient, and not only in these alluvial places of the rivers, but also in central Asia and in the southern Caucasus and in Asia Minor and even in parts of Greece, - everywhere you have a peculiar evolution of the political, economic and social conditions. I have no time to explain to you as far as I understand it, the reasons for the peculiar shape which social and economic life assumed in the Near East. They are many and various. But the fact is that everywhere here you have one outstanding feature of the social, economic and political development: the domination of the idea that God and King are recognized and thought to be masters of the land. God and King! Of course, first God and afterwards, as his representative on earth, the king. He is the master and the ruler, and that decides what form the city would take in the oriental countries. The explanation for this predomination of God and king lies partly in the social and economic conditions; in the necessity of an organized group in this alluvial land under distress of the yearly inundations which required the canalization and draining of the soil; which could not be done by one family or one small group, but required organized labor and a skilful and at the same time united direction of this land. This fact explains pretty nearly the peculiar organization of Egypt and Mesopotamia, but it does not explain why the same type of religious, social and political life exists in Asia Minor as well, which has not alluvial land. Maybe another cause was the fact that civilization was brought into the Near East in general by conquering tribes who brought with them a higher civilization than the civilization which they met both in Mesopotamia and Egypt, and in the rest of the Near East. There are, of course, theories which regard Egypt and Mesopotamia as the places of origin of civilization in general, but with this I do not agree. The facts show that civilization was brought even into Mesopotamia, and probably into Egypt also, from somewhere in Central Asia, and that here also, as in the rest of the Near East, the first attempt at civilization was the work of conquering tribes who brought with them their gods and who had military leaders. Military life requires unity, and the leader of these tribes was the god. In Egypt and Mesopotamia the conquerors found conditions appropriate for perpetuating these ideas and for making them last for centuries and centuries. This type was just suited to the peculiar social and economic conditions of Egypt and Mesopotamia.

Under such conditions what was the city? Probably the conquerors met in both Egypt and Babylonia an already existing civilization, probably even fortified cities, but the cities of the conquerors were quite peculiar cities. I will show you some

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samples of these cities which were excavated during the last few decades. The city was the temple of the gods and the palace of the king - that was the only part of the city that was fortified and regarded as the city. That is the outstanding feature of the oriental cities, and you find this feature in Mesopotamia, Egypt, Asia Minor, Phoenicia, central Asia, also as far as China, and also transported by Asiatics into the European lands, especially Greece. And I will show you some very curious monuments of Sardinia, the Nuraghe of Sardinia, which testify to the same type of cities. These monuments of Sardinia still exist in great quantities. These fortified buildings are just dwellings of kings and temples of gods. Such was the outstanding feature of the oriental cities. Now, of course, the city did not consist only of the temple and the palace. Under the protection of the fortified temple and palace a population gathered. First of all there was the retinue of soldiers of the king and there were the priests of the temple, who built houses near the fortifications. These were sometimes large and beautiful. Afterwards commerce and industry attracted shopkeepers and artisans, who lived in poorer houses around the fortified city. But these places were practically not included in the area of the city. The city was identical with the god and the king, the city was the only place where the god and the king lived and ruled over the land, but at the same time it was the religious and political center of larger or smaller territories.

One of the most important historical features of the life of the ancient oriental world is the tendency to spread and to transform their small territorial states into larger empires. Imperialistic tendencies were born first in the Orient. The history of Babylonia consists of attempts to unite, first, the whole Babylonia under the sway of one god and one king and afterward to make the states and cities around Babylonia dependent upon the leading state. The same is true of Egypt. You have first many states in Egypt, afterwards the tendency of one state to conquer the others and to rule over the whole country, and as early as under the fourth dynasty, the third millenium, B.C., you have imperialistic tendencies, attempts to conquer the shores of Phoenicia and Asia Minor. When in Asia Minor the Hittite kingdom first appears, it appears as just such an imperialistic power, and when Crete by its wonderful development formed a strong united state, the first tendency of Crete was to build up a maritime empire. Now, what is the consequence of these features for the history of cities? It is this: The oriental city was first the political center of the whole country and finally of a larger empire. In the oriental monarchies there exists only one city - the capital of the State. All the agglomerations are not recognized as cities, and that is the origin of the difference between city and village. City for the oriental empires is the capital where the leading god and king reside. For Babylonia it was for a long time Babylon; for Assyria it was first Assur, afterwards Nineveh, etc.; for Egypt it was first Memphis and afterwards Thebes: besides this city no other cities are recognized as such.

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All other settlements are villages subject to the city and having no right of taking any part in the administration and in the rule of the empire. The conquered cities which have been themselves centers of independent states are either destroyed or exist as residences of vassal kings. The empire is ruled by people who live in the only city, and this only city contains in itself the state as such. The king is almost identical with the god, his protector; the city is identified with the god and the king; and the land is identified with god, king and city. That is the evolution in the ancient orient, and that is the outstanding feature of this evolution. Of course, the cities grow enormously. They assume quite enormous proportions and that is only natural. You understand what large and gorgeous cities ought to be the military, economic and political centers of such vast empires as Egypt beginning with the Eighteenth dynasty and Babylonia in the time of Hamurrabi and later. The same is valid for Assyria, which created a conquering state, conquering even Egypt and entirely absorbing Babylonia; and for the Hittite Empire which dominated all of Asia Minor. You must understand what it means from the economic, social and political point of view. Thousands of people came to live near the ruler of these empires. Enormous commercial operations were carried on. Splendid houses of the officials, of the generals, and of the priests were built. One temple after another was built around the chief temple and the chief palace. The relatives of the king and his family lived around the palace. You must not forget that polygamy was practiced, so that the family of the king counted scores of members and sometimes hundreds. Now these people had their own houses and temples. The kings were pious and built one temple after another. The temples were not only centers of religious life, they were the first factories. They employed thousands of slaves and these slaves brought the technique of ancient industry into such perfection that afterwards the Greek world had only to adopt this technique of the ancient order. Nothing of this kind can be produced now. Modern technique can not compare with it. The leading people like Lalicq of Paris and Faberger of Petrograd do not succeed in reproducing it because there was a finer style of technique produced without machinery. Now as you understand, every temple was a large factory, and not a factory specializing in one thing but an enormous factory specializing in many branches of industry, with market places for more than one land, for all that come into commercial relation with the empire. And of course there was created a large merchant class. The merchants had thousands of slaves and so had the priests, and the king had his army, and the courts must have been like a Turkish court in the last times of the existence of the Turkish empire. If we talk of 300 wives of a Sultan there is no exaggeration. If you take the wives and the slaves who formed the life of a king it makes thousands and thousands. So it is not an exaggeration when Babylon is said to be a city of about 1,000,000 inhabitants.

Of course, in such a city much attention was paid by the ruler to the palace and temple, but they could not leave without consideration these enormous masses of men who lived in the most

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unsanitary conditions. They were obliged to take steps to improve the city as such and to form the first foundation of a municipal life. City planning, city regulation of the streets, some laws about building, and so on, were certainly first elaborated in these capitals of the ancient world, in these capitals of the oriental monarchies. Such were the leading types of the oriental world and most of what we can say of the oriental world is true of Jerusalem also, which was of the same type. The temple was the center, and when Jerusalem had a king, it was a combination of temple and palace. Of course there were some modifications. What you expect from me are the broad lines and you must remember this: the type of oriental city is the political center of a larger territorial state empire, the city capital, the city residence, the city of a god and of a king.

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Greece. Mainland and Colonies.

Let me first, before beginning with the conditions in the Greek world, sum up by means of a modern parallel what is my idea about the cities of the oriental world. There is only one parallel which I know - showing the same relations of a large territorial state populated by peasants, one city which is the residence of the god and of the king, and if there are other cities, these cities depending on the main ruling city, or, so to speak, the administrative center for the central government - and that is Russia. Of course, I do not mean modern Russia, after Peter the Great. I do not mean either Russia in its very beginnings. I do not mean the cities of Russia on the River Dnieper. These cities were commercial cities and had nothing to do with the later development of Russia. I mean the Moscow Russia; that is, beginning with the 13th century down to the beginning of the 18th century. You have just the same features as before, an enormous land united by one dynasty leading one people -- just the same as the Babylonian kingdom, the Egyptian kingdom, Assyrian kingdom, the Persian kingdom. The population lived in the villages scattered all over the country and you have one city, Moscow, the leading city, the city which was the residence of church and the Tsar. If you take Moscow, you will see what a striking parallel it shows to Babylon and to Thebes. You have the Kremlin, that is just the temple of a supreme god and the palace of the Tsar, and that is all. No other building existed but the Kremlin, and around the Kremlin existed the enormous villages of Moscow of the 15th, 16th and 17th centuries. The city was the center of political life, administrative organization, military organization; that was the main cause. If there was some trend toward industry, it was secondary. But don't misunderstand me. Such was the situation only to the second half of the 17th century. Afterwards Russia began to develop in just the same way as other European countries. But the explanation of my first point in my lecture before last, of the antagonism of the city and country, lies in this fact of the city being the center of domination and administration. I could perhaps say more about this parallel - just the same type of serfdom, the same type of nobility connected with the Tsar as with the king in Egypt and Babylonia, etc. But I do not like to press modern parallels, and I am going on now to my main subject, the evolution of cities later on both in the Orient and in the Greek world.

The type of city capital, the type of city residence, was not the only type of city in the ancient Orient. Along with these cities, just on the shores of the seas, we see an important international commerce developed between the civilized lands in Mesopotamia and the civilized lands in Egypt, between both of them and the Hittite Empire, and more between the Hittite Empire and the beginnings of a Greek world in the Aegean and Mycenanean borders, with the center of commerce on the Island of Crete just

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Growth of
Commercial
sub-types!

water-based
transportation.

The commercial sub-type
is the [illegible] of
the city state.
(City [illegible])
[illegible] (City [illegible])

at that time, which coincides with the beginning of the second millenium B.C. You notice the development of a new type of city on the Phoenician coast, I mean the famous cities of Tyre and Sidon, and the others which gradually covered the shores of the Phoenician coast, which is the best place for a maritime trade between the central Asiatic land on one hand, Egypt, Asia Minor and the Greek world on the other. Don't forget that land transportation, which is easy now because of the railroads, was a difficult and very expensive thing in the ancient world. A caravan cost much more than a good ship and it moved slowly, indeed. The animals, camels and donkeys move slowly, cost much to feed, are exposed to constant dangers and the difficulties of the deserts. So land transportation was an expensive thing, and it was long before roads were built in the ancient world. Not before the Hellenistic period and the period of the Roman Empire were they built. The oriental time knew only natural paths. So you see, if there was any possibility of avoiding the carrying of goods from central Asia through a long way to the harbors of Asia Minor, if there was a way to shorten the trip, that was a boon, and that was the reason why during this time some villages which were started by fishermen who used to get their living from fishing in the sea, and who invented a method of dyeing stuffs by means of a purple which was made from some little maritime beasts caught on the shores of Tyre and Sidon, became large trading cities. I will show you plans of some of these cities and you will see that the type is always the same. It is most often not a part of a shore, but an island near the shore and barring the way into a good harbor. Here the population was safe. But you understand that this population was just a city, a group of men entirely devoted to commerce who migrated from the shore to the island just to take up, or to go on with, their fishing and dyeing of stuffs. But at the same time they became merchants. That does not mean that they produced things themselves, but that they were intermediaries between the Mesopotamians and Asia Minor and Greece. But they had brilliant profits out of it, because the shore of Phoenicia is full of wonderful forests, cedar forests are still growing there, wonderful pine trees just as if created for building ships. They had, of course, by means of arms, by organizing themselves into well armed groups, the ability to control these forests and to have as much lumber and timber as they liked for building.

This is another type, not a city which was a center of a large agricultural territory, not a city which ruled in the person of a god and king, it was just a community of merchants, free men, who lived on their enterprises; and that is the first example of a true city state, -- that is, a city which was at the same time the state. Now, the oriental state was a territorial state, and the city was only an arbitrarily chosen center of this territorial state. Here the city formed the state. It may be that the city was ruled by an elected king; it may be that it was ruled by a senate of the oldest and most experienced citizens; it may be that

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the city created a kind of democracy. That makes no difference. The most important thing is that it is a city which is at the same time a state. This city may acquire territory or land, it may develop into a kind of territorial state, but the nucleus was a group of merchants, industrials, sailors, and fishermen too (because they carried on fishing on a large commercial scale). Industry and trade developed also in the territorial state, but you see the enormous difference between the type of city created by these merchant groups and the type of city which was created by the peasant state.

And now I pass on to the conditions in Greece. Just when, in Asia, cities developed on the shores of Asia Minor, of Phoenicia, Syria and Palestine, at the same time an analogous type of cities developed on the Greek islands. I should not say of strictly the same kind, but cities that were a combination of the oriential city and this merchant city were developing everywhere and espeeially in Crete. Look at the situation of Crete. It is just an obstacle, a kind of barrier between the eastern seas and the seas of Greece. It was as if it were created for a maritime hegemony, maritime rule, and it is no wonder that her large commercial cities developed and that these cities had the maritime rule all over the Aegean Sea. They sent out colonies just as did the Phoenicians. As the Phoenicians had wide commercial relations, they wanted to have, they needed to have, some merchant stations outside of Phoenicia in places where they were carrying on a profitable trade with barbarous nations. They very soon directed their attention to the West and here was famous Carthage, which was first a commercial station of Tyre in Africa just for carrying out trade between Phoenicia and the mainland of Africa and became afterwards the center of trade with Italy, Sicily, Gaul, Spain, and as far as Britain where they were going to get tin, a very rare product indeed. And from Spain they got silver and from Italy they got iron and copper -- all things very much needed by the oriental world and especially tin for making bronze, as bronze was the main material for making weapons before iron came into general use. The Cretans did just the same. They sent out to the East shores of Italy, to Sicily, to the Greek islands, and to the mainland of Greece, to Asia Minor, trading colonies, factories for trade, and in this way they populated for example the best places of Greece. Hence arose the centers of Mycenae, Tiryns and others which were excavated later in the Peloponnesus. Such settlements were also in Attica where later Athens, the main city state of Greece developed and in Boetia. Don't forget that the acropolis of Athens was first the place of the palace of the Aegean king who ruled over all the country and carried on an important trade and commerce with the wild tribes of Greece. Such were the beginnings of city life in Greece. Not pure oriental cities and not pure commercial cities; combinations of both. But gradually, in Greece, quite a new type of city developed. The origins of this type were many and various. Some places were centers of the Cretan and Aegean domination on the Peloponnesus and

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in central Greece and in northern Greece. Some of the inland places had refuges and fortified villages of the well-known prehistoric types. Out of all these beginnings gradually developed quite a new type of city, which dominated afterwards for centuries and which is still influencing our life and which still goes along with the idea of a territorial state and its capital. I mean the Greek city state.

When did it develop, we don't know. It is covered by the early beginning of Greek history, but we may guess about the origins. Greece at the beginning of the first millenium and at the end of the second millenium B.C., was gradually invaded by tribes coming from the Danube, which passed through the northern part of the Balkan Penninsula and poured into central and southern Greece. They settled down here, they fought each other, they went up and down, and finally they found their last settlement where they remained for centuries and centuries. These new peoples certainly formed the city state. What is the city state? What is the difference between the city state and the city of the oriental countries? What is the difference between Athens and Babylon, between Athens and Thebes? As regards modern parallels there is almost no parallel to the development of the Greek cities. It is easy to find parallels to the purely merchant cities of the Phoenician and Aegean type. Everybody remembers the Hansa cities, like Hamburg; of the same type were the Baltic cities like Riga. More or less of the same type were Venice, Genoa, and Pisa. So it is easy to find parallels of merchant groups forming cities and living in the city, just exploiting their domination of one large part of the sea. But it is not so easy to find a parallel to Greek city states. The only parallel of which I know may be the cities of the Renaissance in Italy, some of them, not the maritime ones - especially cities like Florence. What is the leading part in a Greek city state? It is just this: Combination of city and state. The city is no more a place, no more a center of administration, the house of god and of the king. The city is now more an ideal than a place. The city means all the citizens who form the city. The body of the citizens is the first thing, the beginning; and afterwards they build a center with the houses for the gods and places for themselves, to organize the self-rule of this group of men. So the Greek city is a body of men. For example, Attica, formed one city, and the city center of Attica was Athens; and if you go over Greece you will find certainly hundreds of such independent states with cities as their center. Just imagine on such a small bit of land hundreds of cities and just imagine moreover that each island has a special city and some islands like Rhodes had originally many cities, - three, four, five cities. Such a small bit of land! And now imagine this enormous Babylonian Empire with one city and the enormous land of Egypt with one city, and here hundreds of bodies of citizens living a free life, having a share in the self-rule, and being an independent and self sufficient political and economic body. Now that is the leading point. How it came about that such cities

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were formed, I do not know, and you will not find any answer to this puzzle in ancient history. You cannot help yourself with modern parallels because the Italian cities of the later Middle Ages and the Renaissance were grafted on the Roman cities. They had the traditions of these ancient cities but here you have no traditions, and the city grows up like a wild flower, and that means that for the first time the idea of citizenship, of political freedom, of self-control and self-government, of self-rule, and of self-sufficiency was born. The first citizens in the world were Greek citizens. Now you may say that almost the same thing existed in the Phoenician cities. It may be; we don't know. But the main Phoenician cities represented always a group of men with common economic interests and mostly commercial interests. Here you have different types of people; some live near the sea, fishermen; some in the forests, men who cut lumber; some in the plains; people who till the soil; some in the mountains, people who live by pasturing herds; but all of them united and created the cities. These cities were of different types.

I cannot describe all the types of Greek cities which gradually developed on the mainland and on the islands. It will suffice for my purpose to describe the most characteristic ones only. The type which reminds us mostly of the Aegean and Phoenician cities was the type of a purely commercial city state. Such were Aegina on a barren island near the coast of Attica and Corinth on the Isthmus between central Greece and the Peloponnesus. Both had almost no cultivable soil, and in both the population concentrated in the cities lived almost entirely on its commercial activity. Aegina was the intermediary between Asia Minor and the mainland of Greece; Corinth was on the path of traffic with Italy, which preferred to the long and dangerous rounding of the Pelopennesus the safer and shorter way through the Gulf of Corinth with the unloading of the cargo on the Isthmus. Another type was the type of a purely agricultural city like Thebes and other cities in the plan of Boetia. We have two variations of the type; the city with a free population of small landowners, and the city with a population of landowners on one hand and serfs, who tilled the soil for landowners, on the other. Such were many cities in Thessaly, the cities of the Island of Crete, and the most important of them, the city of Sparta in the Peloponnesus. The social structure of the city of Sparta was the most peculiar of them, dictated as it was by the main idea of self-defense and self-maintenance by means of a strong military organization of the ruling minority. But taking into consideration this peculiarity, we must say that Sparta was just a typical city state with a body of self-governing citizens in their rights and duties.

The most complicated type of a Greek city state was that of Athens, which formed the political center of a comparatively large territory, not exclusively agricultural, with large pasture lands, good forests, some mines, and excellent harbors. Naturally conditions of social and economic life in Athens were more complicated than in the other cities, and the development of the city state took somewhat different forms.

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In spite of these different social and economic conditions, determined partly by the former history of those parts of Greece where they had developed the main lines of the evolution of the city, the modes of transformation of an Aegean royal capital or of a simple refuge of half-wild tribes into a real city state remained almost identical. Almost all the Greek cities were created not by conquest or by violence but by a kind of understanding between the different parts of the population, both conquerors and conquered. This process is comparatively well-known to us in the case of Athens.

Thucydides, the great historian of Athens, who knew about history as much as we know, who had a sharp eye for social and economic conditions, speaks of Athens as created by the act of synoecism. Synoecism in Greek means "settling together" and this means that many populated centers were united and formed one main center of political and economic life, one city:- many scattered houses, many villages, many refuges, many fortified villages, many tribes and clans, etc., come to an understanding and form one political body, one polis (city) and one politeia (city-state).

Such is the history of the origins of the Greek city, and of what enormous importance in history! First of all I have not seen any social, economic, and political form which had so enormous and rapid success in historical evolution. One after another new cities covered, first, the whole main body of Greece and then spread as far as Macedonia and Epirus. At the same time all the larger and smaller islands were transformed into city states; no one island remained without a city. But the most important thing is that the city is like a bee hive. These men who formed cities were continually swarming about. They sent one group after another to create new bodies, new bee hives, new cities. That is what is meant by Greek colonization, one of the most striking features of Greek history. It can but superficially be compared with the colonization of America. The first ground for colonization was the shores of Asia Minor as early as the end of the second and beginning of the first millenium, B.C., a troubled time of migrations and disintegrations for the oriental world, which made the task of the Greek colonists an easy one. Colonies were created by bodies of men well organized, all knowing what they wanted and what they were striving for. They got together, elected a chief who was the founder of the colony, and they went out looking for some place where they could live. Certainly it was dictated by the social and economic conditions of Greece. You know that Greece is one of the most beggar lands. It is mere poverty which still reigns in Greece. Greece is not rich in pastures or fertile soils. It has almost nothing except air, much air, and plenty of sun. And there are almost no fish in Greece. It is poverty which reigns in Greece, and that was the leading motive for emigration and for colonization. Asia Minor is one of the richest lands in the world. It has wonderful pastures, good mines of copper and gold, and wonderful opportunities for planting olive trees, vineyards, and for making very good gardens. It is also possible

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The rise of
Civilization.

(which empire in question)

The pre-eminance
of the commercial?

to plant all of this in Greece, but it is much better to do it in Asia Minor where you can at the same time have rich fields which yield your daily bread. So the colonies went out with different purposes - people who used to live on fish looked for good places to organize fishing on a large scale and from where they could send lots of salt fish to the mother country. Other people went out to look for places where it was easy to find rich fields not very well protected by the natives, and to subject the natives. Some went with the purpose of getting their living and at the same time having good commercial opportunity in some place which was well situated. But the most important thing is that the swarms of Greeks coming out of the cities of the mainland started a city everywhere they went; a city state of the same type as in Greece. They never were submerged by the natives. I do not know of one example. They were destroyed, but never submerged even in the Orient, which was a very civilized land. They never yielded to a foreign civilization. They thought that their civilization was the best one, and they imposed their civilization and their political life, and that means the city state. Such was the type of the Greek colony.

One of the earliest colonies founded was Miletus. The Greeks never went far away from the city. They always populated the seashore, never went to the mainland. They were afraid of being separated from the mother country. The relations with the mother country were never broken. They kept the relations jealously and they never forgot which city in Greece sent them out. So, for example, Syracuse never forgot that it was of Dorian origin. Miletus never forgot that it was an Ionian city. Miletus alone sent out eighty colonies. These colonies never forgot that their mother was Miletus.

Here you have Greece; here Asia Minor.[1] First of all the important sites, harbors, valleys of rivers in Asia Minor were populated by Greeks and consisted of Greek city states. From here and from Greece a colonization went through the straits (the Dardanelles and the Bosphorus) and populated the shores of the straits and those of the Sea of Marmora by scores of colonies, one of which still is the capital of the oriental world, Byzantium, the old Greek colony, is now Constantinople, the center of Turkey and for a long time the center of the oriental world. They did not stop at the Bosphorus, but went out on the inhospitable Black Sea, on the southern shores of the Black Sea, founding one colony after another and of these Sinope, Eregli (Herakleia), Samsun (Amisus) and Trebizond are still important. And it is interesting that no one of these Greek cities perished during the Turkish movement. They went as far as the Caucasus and created two large cities, Dioscurias and Phasis, and, not satisfied, they populated all the western and northern shores of the Black Sea as far as the mouths of the Danube, Bug, Dnieper and Don, and the Crimea. But they

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[1]From this point on Professor Rostovtzeff made constant references to the map.

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went not only to the East; they went also to the West. They covered the shores of southern Italy with colonies and Sicily, and went as far as Gaul and created there the flourishing city of Marseilles, and in Spain they created some cities. Here they were stopped by Carthage, the mighty rival of the Greek expansion, and that is why they never populated Sardinia and Corsica. Spain also remained almost entirely in the hands of the Phoenicians. That is the type of the city state which introduced into the life of humankind so many new ideas, our leading ideas of democracy and political thought, which were never created by the oriental people who could not understand them. These cities were disseminated all over western and eastern Europe.

That is not the end of the history of the Greek cities. Next time I will finish the story before I begin to talk about the Hellenistic period.

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Conclusion of Lecture on Greek Cities.

I have described to you the spread of the type of Greek city state all over the shores of the Mediterranean Sea. You remember that Greece was the land of the city states. Here the mainland as well as the shores were occupied by scores and hundreds of city states. Afterward almost all the shores of Asia Minor, that is, the western part of Asia Minor, were covered with Greek city states. The shores of the Black Sea, the southern part of Italy, and almost the whole of Sicily, were also places where city states developed one after another. The development of the Greek city states was checked by Phoenicians only. So the Greeks did not come down as far as Phoenicia where the place was already taken by Phoenician city states, and Carthage, the Phoenician colony, prevented the city states of Greece from spreading through the coasts of Africa over to Spain and up to the shores of the northern seas.

Now, of course, the Greek city states had not all the same historical development. Some of them developed in one way from the economic and social point of view, some of them developed in a different way. I will give you briefly the most important types of the Greek city states, not from the political point of view, because from that point of view they were all alike, but from the economic and social point of view, and from the point of view which interests us all, that is the point of view of the city as such.

From the social and economic point of view, and the point of view of the city development, you may divide the Greek city states into three large classes. One class was the commercial, the trade cities, the center of commerce and industry. I have already named to you two of these cities and explained to you the reason for their development. They were Corinth in the Isthmus of Corinth between the Peloponnesus and Greece and the island of Aegina. The latter is perhaps the most striking example of a commercial city. It was a small island, very poor indeed, with untillable soil and only some woods and rocks. And still it was one of the most flourishing cities in the Greek world in the 7th and 6th centuries, B.C., as is shown by the abundant coinage which became the leading coinage in Greece of this time. The most important thing is that it was due entirely to an enormous development of commerce and industry. As a place of exchange where goods were exchanged between the different city states of Greece and between Greece and Asia Minor, Aegina grew rich and important. Such is one type - pure merchant city, pure industrial city.

The second class is made up of the pure agricultural cities, the leading city having a military and agricultural organization, that is Sparta. Another city or a conglomeration of cities of the same type was situated in Thessaly, in the large land of Thessaly,

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which was very rich indeed. Thessaly was, again, a land of agriculture, where the cities were the centers of purely agricultural land, and there, as in Sparta, we find a body of landowners and a body of serfs working on the soil. The social and economic organization of Thessaly was not quite the same as in Sparta where you had as the ruling body a military organization or citizenship. In Thessaly you had a pure aristocracy of landowners who lived in the cities and ruled over the serf population. However, the main point is that there are two examples of pure agricultural cities.

Now the third type is a mixed city, of a mixed type, not of a pure type. It is a combination of a city as a center of an agricultural district and of a city as a large commercial and industrial place. Such cities (I will show you some slides) are represented best in Greece by Athens, and in the colonies by the two leading colonies, - first in the East, Miletus, and in the West, Syracuse. Here you have first of all a comparatively large agricultural district populated by peasants, the city being formed partly by citizens through an understanding, and partly by colonization. Syracuse was a Dorian colony; Miletus, a colony of Attica. The main point is that in all three cases you have the same type of a large agricultural district populated by peasants and a leading and ruling city as the representative and as the center of this large body of citizens. But there were differences between the colonial cities and Athens. In Athens you had a body of citisens who owned the land of the territory. It is a large body of city population on one hand with the occupations of a city, and, on the other hand, of peasant landholders spread all over the country. Of course they had a few slaves. But the main point is that it is a state, organized on democratic lines from a political and economic point of view. The main body of population is made up of free citizens who are, at the same time, landowners. Now in the colonies you see a different organization. It is a body of Greeks coming to a land already populated and already flourishing, who first built a city near the coast on an island, afterward moved to the mainland, conquered a large tract of land with a population, and formed the city aristocracies ruling over a large body of serfs who tilled the soil for them. In Syracuse it was an aristocracy of landowners. It seems to be the same type as in Sparta and as in Thessaly, but it is not. The agriculture and the cultivation of land were only the starting point. The next point was just the same development as the democratic city of Athens, a large development of commerce, industry and related occupations. It is explained in Miletus because that was the intermediary between Greece and the Orient. Miletus was the outlet for the civilized land of Asia Minor. Now here, of course, some industries had a very high technique. I spoke of the technique of the oriental world. This technique was taken over, improved, and modernized on Greek lines, by means of a very large body of slaves organized on factory lines. And so you see the Orient came into Greece, and the oriental skilfulness was used by the

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Greeks for Greeks and for international commerce. As such a center of commerce and of industry Miletus developed into a large, well populated city, populated of course by citizens only and by slaves. The serfs who worked the land became quite unimportant for the further development, and it is quite possible that serfdom was soon transformed into minor forms of citizenship. In Syracuse there was almost the same development. Syracuse is still a large center of commerce in Sicily, and was much more important in the ancient times because it was the main point where the commerce coming from Italy and the West met the commerce from the Orient.

Such were the large commercial, industrial, and at the same time agricultural cities. Of these cities the destinies of Athens were the most important because of political evolution. Athens gradually, after the Persian Wars, became a center of a political organization which took in almost all the cities of Asia Minor, all the cities of the islands and many cities on the coast of the mainland of Greece. It was a federation of some hundred cities, a large state, where Athens, more and more, got the leading part both in politics and in economics. By means of a policy which was carried out by Athens, Athens soon became the leading harbor and the leading commercial center of this large district of industrial, commercial and agricultural cities. It lasted for about one century, but it was enough to make out of Athens the largest and most beautiful city in the Greek world. And now it is very interesting to see how under these circumstances Athens, just like Miletus and Syracuse, developed as a city. First of all Athens was not situated near the sea. It had two wonderful harbors, Piraeus and Phaleron, some miles from Athens. Athens should, of course, in the times of its maritime supremacy have spread from its place on the inland to the shore; but it did not. It built a large modern harbor on the lines of elaborate scientific plans, just on the harbor or near the harbor of Piraeus. That was quite a modern city, which had not happened before. The cities before and the colonies grew up as mushrooms, one mushroom and afterwards others around it, and so on and so on. The center was the political center, the acropolis, temples, theatre for shows and popular assemblies, with public buildings, and no one paid attention to how the rest of the city was developed. And so grew up all the colonies and all the cities on the mainland, as, for example, many cities in Europe grew later. Many cities, for example, in Italy grew up in the same way and that is the reason why the streets are narrow, the conditions unsanitary, the houses situated in different directions, etc., etc., and everything is chaotic. But in the fifth century science and especially mathematics, and in connection with mathematics measuring of land on the basis of geometry, were already developed to such an extent that when the harbor of Athens was built, it was an entirely new city for the purpose of serving the empire of Athens. The lines were dictated by an architect. The city was planned on geometric principles, the streets were broad and straight, they crossed at right

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angles, public places were planned at the beginning. The harbor, from the beginning, was built as an artificial harbor with quays and docks and everything for ship-building, etc.,etc. Large storehouses were built at once, presenting just the appearance of a great modern harbor, as for example, New York, without of course our improvements. That was a new device in the history of a city.

At the same time what was important in the development of the city of Athens itself is that the city was not the residence of the king and clergy, but existed for the citizens, not for somebody else. And so the body of citizens tried to regulate life in the city, to make it easier, to make it more comfortable and better for everybody who lived in the city. That was the beginning of state regulation of city life. The first magistrates who were not political magistrates of the state, but had the special business to look after the city streets, to see that they were cleaned, to see that the food supply was in regular quantities, etc., were created in Athens and were called, I may say, city mayors as now, astynomi. Asti means city, nemein means to care for. We have people or men elected to care for the city. We have the first laws on city life, how to build houses, how to keep in order the streets, who was responsible for the dirt thrown out from the houses onto the streets, who had to carry it away. (Which by the way would be a good thing in Madison). Plato in his works refers to this activity of the astynomi and gives some plans as to what the regulations of city life should be.

As the city of Athens and the other cities of this type grew up widely with enormous strength, the population grew also, and of course the conditions of transportation were such in the city, without tramcars, subways, etc., that the cities were large in numbers of inhabitants, but small in size. That means that the land ih the city became more and more expensive, and that instead of the old type of house which served for one family, the type of houses which served for many families and some apartments replaced the old type of family house. And along with this, speculation in land and in houses was developed. This was the first time that speculation in land occurred. Later on you will see what enormous development it took in Rome, the capital of the world. We first meet the question of land speculation in Rome, but it was already prepared for by the evolution of such cities as Athens.

The Hellenistic Period.

The empire of Athens did not last very long. It was checked by the ambitions of Sparta, which was the leader of political life in Greece. And you know that the tremendous wars for Greek supremacy developed between the two leading cities, between the maritime city of Athens and the agricultural city of Sparta, the Peloponnesian War. This war is compared with the fight of a whale and an elephant. And it is so. This enormous sea monster, Athens, and this enormous land monster, Sparta, It ended in the victory

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of Sparta. Both parties were vanquished and Greece began politically to decay. I should not like to fortell the decay of Modern Europe. Sparta was as well vanquished as Athens, but the main point is this: Of course as a result of the war the Persian monarchy reigned again in the Greek world and the oriental world became, so to speak, the ruler of the destinies of the western world. But at the same time in Greece, in Macedonia, developed a strong united monarchical state and this state was ready to begin the fight for domination against Persia, trying to unite with it the forces of Greece. Its first task was to unite Greece with Macedonia under the rule of one king, and the two kings, Phillip and afterwards Alexander, succeeded in doing this. Afterwards the main purpose was to check the avalanche of the Persians. As you know Alexander moved first against Asia Minor, to free the Greek cities, afterward to Mesopotamia, finally to central Asia, and conquered the whole of the Persian Empire; and you know also that this enormous empire, the Macedonian Empire of Alexander, did not last for very long. Alexander died very soon, just at the end (not yet the end of his political plans), but at the end of his conquest of the Orient, and after him his empire was divided into many monarchical states of which the leading ones were just the old states of the oriental world. First of all Egypt, the second Syria, Mesopotamia and Central Asia, and the third was Macedonia ruling over the Greeks. Later on the process of disintegration was going on and one new empire after another was formed. First of all some states in Asia Minor, especially the state of Pergamum which occupied the best part of Asia Minor.

What did it mean from the historical point of view and the point of view of the development of cities? It means that now the Greek world was no more confined to the mainland of Greece, to the shores of Asia Minor, and to the southern shores of Italy, and to some places on the shores of the Black Sea. No more! The Greeks became the ruling nation in many states which covered almost all of the civilized world at that time. It means that as Alexander was a Macedonian and was a Hellene, as his generals who took over the rule in different lands were also Macedonians and Greeks, the Greek nation was now the ruling nation in both the Orient and the Occident, and that meant that devices of Greek life were introduced into places where nobody had heard anything of them before and where the devices of oriental life reigned supreme. Greek life poured in, not only on the shores of Asia Minor, but inland. It poured into Egypt, Phoenicia, Babylonia and Mesopotamia, and also into Turkestan. It is interesting that the leading cities of Turkestan were created by Alexander the Great; and this Greek influence went down as far as India, but there it did not last. But in the rest of the world it lasted from about 300 B.C. down to the time when Rome conquered the Orient. But that did not mean the end of Greek influence and predominance, because Rome was only the follower of Greece and took over the work begun by the Greeks.

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Now what did it mean - this introduction of the Greek lines of life? First of all it meant the introduction of the type of Greek city into oriental life, and that was the beginning of a spread of the Greek cities all over the Orient. You will see that the same task was taken over and achieved by the Romans in the West, and that is the origin of European city life. In the Orient, cities grew up one after another, covering the main body of Asia Minor, parts of the southern Caucasus, Assyria, Babylonia, even Egypt, although they were not called cities in Egypt, but villages. Now, again, what types of cities developed in the changed conditions of life, - because the conditions were changed? The city state was no more the ruling political form of civilized life. Most of the new states were mere territorial states, ruled by monarchs who took over the traditions of the oriental monarchs. These monarchs, knowing that they existed and ruled so long as they had a Greek army to support them and the Greek population of their kingdom to back them, were not purely oriental rulers. They tried to form a compromise between oriental and Greek life, and this means that they were obliged to give to the Greeks the possibility of living conditions such as they were accustomed to, and that means living in cities, each having a territory of land and self government as far as internal affairs were concerned. They paid taxes to the treasury, but the rest was left to the Greeks. "Do as you like, govern yourselves, and rule yourselves as you like," that was the main compromise, the compromise between the oriental monarchal power at the head and self-governing territories forming the main foundation of the state. Of course, the territories of the cities did not cover the whole of the territory of the kingdoms. They covered the most fertile parts of the territory. The rest was populated by subjects of the king, living in the same conditions of serfdom that existed under the oriental dynasties. That is a fact to retain and not to forget: that the largest part of the population was still living on oriental lines under the oriental monarch. But at the same time, in all these masses of population living an oriental life, were introduced larger and smaller islands of Greek civilized life.

Now what did it mean for the development of the cities? First of all it means that quite a new type of a city developed with a division of the empire into many independent kingdoms and the formation of new capitals in the new states; this type was a combination of an oriental capital with the type of a commercial and industrial city which is best represented by Athens. I should say a combination of Moscow and London, because London is the best parallel to Athens. It is the head of a maritime empire, and a commercial center. Such a city was first, of all, the leading city in commerce of a new world, created by Alexander himself - the capital of Egypt, on the sea, transferred from Memphis and Thebes on the river to Alexandria on the sea. (That means a complete change of all conditions of Egyptian life. It means the Hellenization of Egypt). The city grew large and rich at once, as it was backed by the richest country in the world of ancient times. Egypt was always the richest country in agriculture, and so it was

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only natural that Alexandria should become the capital of the Hellenistic world. Alexandria was not alone in the Hellenistic world. A city built at the same time, as near as possible to the sea, on the river, was Antioch, the capital of the Kingdom of Syria - the same type of a capital of a state ruled by one monarch, built on Greek lines and administered on Greek lines. The same was done in the other monarchies of the Hellenistic world: the ephemeral Thracian kingdom of Lysimachus, Macedonia, etc. In some places where Greek cities were already in existence the Hellenistic kings transformed one of these into a capital. So did the Pergamum kingdom with the city of Pergamum, which was entirely rebuilt and filled with the best buildings and artistic works. So did also Bithynia, Pontus and the rest.

Most of these new capitals were purely artificial cities. Modern parallels are Berlin and Petrograd. These are also artificial cities built by kings, and are combinations of cities of the oriental type with the cities of Greek type, or European type. They are residences and capitals, and, at the same time, centers of commerce and industry. Such artificial cities of course were built on the lines of the most modern achievements in science and technique. Athens was a poor village compared with the beauty of Alexandria, which was built on the lines of scientific town planning. It had large blocks of houses, straight broad streets crossing each other at right angles, wonderful canalization - we may be able to restore the main features of the city of Alexandria while investigating the canalization - and a very good supply of water. In the center of the city were the palaces of the kings with wonderful buildings, and among these buildings the first academy of science, just like the Berlin or Petrograd academy of science. Scholars lived at public expense and were obliged to teach a little for advanced people, especially for introduction into research work. The people of Alexandria were the first to build a zoölogical garden. They were the first to build up a real gallery of pictures, and they were the first also to create a library, a public library. The library was the most famous in the world, and its disappearance was due probably to the Arabs, who burned at least a part of this library. Of just the same type was Antioch, and the German excavations of Pergamum show that just the same thing was going on there. In Pergamum, for example, we have still the ruins of its famous library, the rival of the Alexandrian library. So the main point is a large artificial capital built not only for the king and for the court and for the gods, but built also for the citizens, with the best possible comfort for the citizens, built to make life easy and comfortable. But the same thing happened at Athens that happened in Alexandria. Means of transportation limited the city, concentrated the population, and houses grew up like the skyscrapers in New York. Not so big, of course, but comparatively big for Alexandria. I will show you some slides next time, and you will see what these capitals were like.

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Along with the building of capitals we have a consequent transformation of the territories of the Hellenistic kingdoms, except Egypt, into a conglomeration of city territories; this was done by different means and in different ways. One of the most important was the foundation of military colonies. The Hellenistic kings ruled, of course, by mere force over the population which did not recognize them and did not like them. They ruled only because they were rich; they imposed taxes on the subjects and were able to pay a large mercenary army consisting mostly of Hellenized or Greek people. This army was necessarily a standing, permanent army, and as such it was a heavy burden on the finances of the kingdoms. To keep the army busy in peace times and at the same time to diminish the burden of the treasury, the Hellenistic kings formed the soldiers into military colonies, settling them in a new city and giving them large parcels of land which formed the territory of the city. The same devices were used for the veterans. Such was one type - the military colonies of soldiers and veterans.

A second type was the colony of emigrants from Greece, who came to look for new opportunities in the economic life, and who asked for places to develop their activity in the new monarchies. Some of these emigrants were absorbed by the capitals, but the larger part formed new cities with large territories. This was the third type of Hellenistic cities. And a fourth type was a remodeling of old Greek cities on new lines, which was made possible by the enormous wealth acquired by these cities because of their new relations with the Orient, more or less the same thing that happened in Spain after the discovery of America. Most of the old Greek cities, especially in Asia Minor, were rebuilt on new scientific lines, giving the population just the comfort and the ease which was required by everybody, by what was then a civilized man. Needless to say, the same was the case for the cities which were first built during the Hellenistic period.

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Lecture 4
February 23, 1922.

The Roman Empire

Thus far I have dealt mostly with the Oriental world and with the Oriental part of the civilized world. The regions of the Near East, Egypt, Asia Minor and Greece attracted our chief attention. But remember that our problem was to investigate the conditions of city life in Western Europe, where city life had a more brilliant development than in the Orient, and where city life was the foundation of the future development of civilization and of civilized life for state and people. In the Orient the cities did not thrive for very long. You know that the late Roman Empire had its main center in the Greek city of Byzantium, now Constantinople. But this is almost the only great city which remains from the ancient times that still has an importance in the history of civilized mankind; and of course, as you remember, in the earlier times it was not one of the leading cities of the Oriental world. Byzantium played in the history of the Greek world rather a modest part until Constantine, one of the Roman emperors in the 4th century A. D. transferred one of the centers of Roman state life to this rather modest place. Of the other cities I have named to you, only Athens, Smyrna, and Alexandria still exist as comparatively important centers of city life; but compared with the importance which these cities had in ancient times, their importance of to-day is almost nothing. Athens is the capital of modern Greece. Modern Greece has a certain part in the life of the Near East of to-day, but, as you know, the Near East does not play a very important part in our economic and social life in general. Smyrna, the capital of Asia Minor, is in the same position. Alexandria is still the main harbor of Egypt. The capital is the old Memphis, the new Cairo. Alexandria is one of the harbors of the new modern Egypt, but its importance cannot be compared with the importance of ancient Alexandria. Of the other Oriental cities I could not name one which has the importance which many of the cities of the Greek world had in the ancient times.

Quite different are the conditions in Western Europe. You know that Italy is now a conglomeration of cities. I know of no journey of two or three hours that can be made there without passing important cities. Italy is full of cities. If you take France, if you take Spain, Belgium, Germany, even the lands of the Danube, you have everywhere the same picture. Cities one after another. Try now, for example, to travel on the Rhine. You will see almost no interruption between the cities which are situated on the Rhine, and I should say that a large part of Belgium is one large city. You pass through some places in Belgium where there is no free space between cities. The same is the case in the southern part of England, and America, as I have told you, is under the same kind of development.

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I must come now to solve the question of the origin of this city life in Western Europe. It is a problem of modern evolution, of evolution in the Middle Ages and afterwards in the time of the Renaissance, or is city life older and more ancient than that? As you look at the map of Western Europe nowadays and you try to fix the history of the most important places you will see that, for example, in Italy you have no one city which is not standing now on the ruins of an ancient city. For example, Florence, Milan, Genoa, the largest cities of Italy, are all situated on the place where cities were already flourishing in the ancient times. Of Rome you know the story. I do not need to explain it to you. City life never ceased in Rome. The same is true about Naples, all the cities of Sicily, etc. In France -Paris, Lyons, Marseilles, Bordeaux, etc. were cities in the Roman time. On the Rhine almost all the leading cities are ancient Roman cities. (Cologne, Mainz, Strassburg, Bonn, Tieves, etc.) In Spain it is just the same, and almost all the leading cities and capitals on the Danube are heirs of a Roman city (Vienna, Budapest, Belgrade, Sophia, etc.)

It is necessary to explain the origin and to understand how they developed. What were the reasons for the transformation of Western Europe into city territories? You must include in Western Europe the northern part of Africa also. Although now Northern Africa is no more a land of cities, like the rest of the Orient, in the Roman times it was a land of cities as well as Germany, France, Italy, etc. But later we have the destruction of the leading cities in Africa and the preservation of only a few of them. Such are the conditions.

Now what is the origin? If you take Europe at the time when cities were developing, first in the Orient and afterwards in Greece, Europe was in no way a land of cities. Western Europe was covered with the type of prehistoric centers of social life of which I have spoken in my first lecture. Protected fortified villages, refuges for shepherds and agriculturists, lake dwellings partly imitated on dry land, such were the types of centers of social life in western Europe as far down as, I should say, the 6th and 5th centuries B.C., the time when the Orient and Greece especially were already covered with many cities.

Where did the city life originate in western Europe? Of course in Italy! And you understand perfectly well why. Of course, Carthage in Africa did not play a very important part in the development of city life in the western world. Carthage was a commercial city and exploited the western world from the commercial point of view, as a place of exchange between the Orient and the western part of the European world. Of course, Carthage founded many colonies, but these colonies were seldom cities and centers of city life; they were very modest and not propagating, just stations for commerce. Some of them were situated on the shores of Sicily, some in Sardinia, a few in Corsica, many in Spain. In Britain we have not yet discovered one of these stations. All

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that we know is that the commercial relations were important. So Carthage did not play an important part in the development of city life in the West.

More important was the part played by the oriental and Greek world, by the oriental world because a part of the population of Asia Minor emigrated, probably about 1,000 B.C., from Asia Minor and went to settle down on the shores of Italy, I mean those mysterious people, the Etruscans. We can read their inscriptions, but we cannot understand them. But we know a great deal about their civilization, and so we are able to judge that the main foundations of this civilization were of the oriental type flourishing about 1,000 B.C. in Asia Minor. Now the Etruscans, even when in Asia Minor, were in relation with the Aegean and Greek world. Very soon they developed a half Greek life in Italy also. They remained in constant relations with the Greeks and were under the strong influence of Greek forms of social, political and economic life. So they formed in Etruria a nucleus of some scores of cities on the Graeco-Oriental model, on the model of the Greek cities in Asia Minor. They were abodes of a conquering population of big landowners and wealthy merchants, who lived under the protection of their walls built of stone, and who dominated the land populated by peoples of Italian origin who worked for them as serfs. That is just, as you see, the type of half oriental life in Asia Minor. That was one spot which was the first center of city life in Italy.

The second was in southern Italy and Sicily. I have told you these places were for the ancient world just what America was for England in the colonial period, and many scholars indulge in the drawing of a close parallel between the development of America - the Great England, in regard to England and the development of this Magna Graecia on the shores of Italy. That is not very important, but it is interesting, because Greek civilization was implanted in Italy in leading and very important cities many of which still keep their importance as centers of social and economic life. For example, Tarentum is situated on the site of a large and important city which existed all through the Greek times and the times of Roman domination. Naples was one of the main harbors of the Greeks, beginning with the 7th century B.C., and is still the leading southern port of Italy. Syracuse, the center of a large Greek state, was one of the largest and most beautiful cities of the Greek world. Although it is now not as important as it was, it is still existing as a city; it is one of the important cities of Sicily, though, of course, not as important as Palermo. One city after another was built in Italy by the Greeks, with all the realities of city life; and this process began as early as in the 9th century B.C. and lasted through the 8th, 7th, and 6th centuries. During this time almost all the important places suitable for agriculture and commerce in southern Italy were occupied by the Greeks.

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Now you know that these two centers of civilization in Italy were very important for the development of the Indo-European tribes not belonging to the Greek stock which settled in Italy, those which we call Italic tribes. They were akin to the Celts (the Gauls) and the Germans. They probably came from the Danube across the Alps and settled down first in northern Italy and afterwards propagated all through the peninsula of the Apennines. Now they were cut off for a long time from the sea by the Etruscans and by the Greeks and by some Illyrian tribes which still exist on the eastern shore of the Adriatic Sea, as the eastern shore of Italy was almost entirely occupied by peoples of the Illyrian stock. So the Italians were confined to the mountainous lands on the Apennines, and the only outlet they had to the sea was at the mouth of the Tiber where one branch of the Italians, the Latins, had patiently built up civilized life and a state life which constantly developed and took more and more firm hold. What is the explanation of the fact that this whole place was left to the Latins by the Etruscans and the Greeks? The mouth of the Tiber is not a very attractive place. It was infected by malaria, and it is very hard to cultivate. The soil is very calcitrant and not very well adapted to the efforts of agriculture. On the other hand, Latium was a kind of neutral zone between the two rivals - Etruria and the Greek Italy, - where both the Etruscans and Greeks had their commercial interests. That explains why the early civilization and the city life among the Italians first developed in Latium. I need not explain at length how civilized state life developed in Latium and how gradually the leading cities which founded a colony near the mouth of the Tiber, the future Rome, were obliged to cede the supremacy to Rome and how Rome developed into a leader of the Latin cities and, so to speak, the president of the league of the Latin cities, the leader in war and peace.

It took some centuries to transform Rome from the refuge of shepherds and a fortress of Latium, a bridgehead against Etruria, into a large and flourishing city. Suffice it to say that Rome was the last in Latium to develop on the lines of city life. The Latin cities underwent the same process earlier, and that was due to the influence of city life coming both from Greece and from Etruria. So the first place for the development of city life in Italy, along with southern Italy and Etruria, was Latium with many comparatively big cities of which many still exist. For example, Flascab (Tusculum) and Tivoli (Tibur).

The second place for the development of city life in Italy under Greek influence and affecting another tribe, was Campania, one of the best parts of Italy now. You know that the Italians say "See Naples and die." That is the best land, very rich indeed - rich in wine, rich in olive trees, rich in crops, having everything which anybody may wish. It has a wonderful climate. This best place attracted, of course, from time immemorial all the leading

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peoples in Italy. First, the Greeks, who created here some flourishing cities like Naples and Cyme. Afterwards the Etruscans, during their domination in Italy in the 7th and 6th centuries, tried to seize this land and build a city which was called Capua. Afterwards the Samnites, who were under the influence of the Greeks, for centuries trading with them and imitating their civilization, got organized and rich, and of course in their mountains there were not as many opportunities as in Campania, so they tried to occupy Campania. The natives of Campania had been under the strong influence of the Greeks from time immemorial and they began to build flourishing cities as early as the 5th century B.C. and probably earlier. One of the most splendid examples of these cities in Campania was Pompeii, a city which was the center of the native population. It was later influenced by the Greeks and was Hellenized and became a city of the Greek type. Afterwards it was for some time taken by the Etruscans and developed by the Etruscan influence, but that was for a very short time indeed. Finally, it became for a long time a city of Hellenized Samnites. Cities like Pompeii were many. Nola, Stabiae and Herculaneum are the cities best known to us because they were covered by ashes during the eruption of Vesuvius in 79 A.D. So Campania was the second place of development of city life, and under this influence city life was propagated everywhere in Italy.

Now you know the destinies of Rome. Rome first succeeded in uniting around herself the cities and the peoples of Latium; afterwards she gained strength in the conflict with the mountainous peoples in her nearest neighborhood and succeeded in conquering them; gradually she conquered one part of the Etruscan territory after another; finally, after very long and very important wars with the Samnites, Rome succeeded in uniting under her sway all of central Italy. After that Rome began political relations with the Greek cities and asked the Greek cities to obey her and to enter into the Roman alliance, as she called her form of political domination. Italian Greece tried to refuse to enter such an alliance, but was conquered and was obliged to enter into the Latin-Roman alliance by the middle of the 3rd century B.C., at the time when Greece was in her Hellenistic period. At this period Italy was united under the leadership of Rome, and that is a very important topic and very important feature, because Rome was a city state, just a city state of the Greek type. The Greek influence lasted too long in Italy not to achieve in Italy the city state. The Latin cities which formed the earlier alliance of Rome were all city states. The Etruscan cities were another group of city states on the Greek model and the cities of Campania were again organized as Greek city states. So the leading form of political existence in Italy was an alliance under the leadership of Rome of scores of city states. But the city states did not occupy all of the territory of Italy. Many places in the mountains and in the plains remained outside of city territories and of the form of life of the city states. Rome accepted entirely the Greek idea of civilization, i.e., that civilized life was possible only in the form of a city state; and so Rome, when it became possible

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for her, began to develop city life consciously in Italy, with the purpose and principle of implanting new and more new cities all over Italy.

One of the most important features of the establishment of these cities on the Greek model was the sending out of colonies. One colony after another was sent out by Rome to different places of Italy - many of them were situated on the shores, in the mountains, and everywhere. The leading feature of these colonies was not the same as the leading feature of the Greek colonies. The Greek colonies were just new city states created by the Greeks, independent of their mother country, and having only the importance of being new centers of civilized and political life. For Rome a colony was a different thing. For Rome the colony was the propagation of Rome through Italy, and of Roman domination. The colonies were not independent city states; they were branches of the Roman city states - branches, living bodies, taken off the body of Rome and implanted for the purposes of the Roman state in different parts of Italy. Preservation, therefore, meant military organization for a long period. They were more of the nature of fortified places and of military camps than new centers of agricultural or commercial life. But, of course, the Roman state was a peasant state. The Roman state was founded on the peasants of the plains of Latium, who transformed the treacherous soil into fertile and pleasant land by means of hard work. The Roman army was an army of the peasants and the leaders were leaders of armed peasants. That means that the colony was not only a part of the Roman citizen army, it was at the same time a branch of the Roman agricultural community, conquering the land as well by means of arms as by means of plows in these communities. An implantation of the Roman colonies meant always the creation of a new agricultural territory by the Roman peasant soldiers. That is very important because it will show how afterwards Rome implanted the same kind of new cities outside of Italy in the provinces and especially in the western provinces. That was one means of propagating city life in Italy.

The second was sending out, not colonies of Roman citizens only, but colonies of the allies who gathered around Rome, first, the Latin and afterwards the Italian allies. They sent out colonies of the same type and for the same purpose. And gradually Rome tried also to implant into the life of the tribes, which did not know anything of city life, the necessity of going over to a city life; because Rome treated only with groups that were organized, which had the same form as Rome had, I mean the form of a city state. With the tribes no real alliance was possible. That was possible only between one city state, which was Rome, with another city state. Therefore, the existing city states of Etruria, Greece, and Campania were accepted in the alliance without difficulty. But there were many tribes in central and northern Italy populated by Italian and Gaulic tribes where city life was practically unknown. Of course, the germs of city life were imported into these territories with the Latin and Roman colonies.

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These germs began to develop, and these Roman colonies were gradually imitated by the native population, and territories populated by the tribes were gradually transformed into cities with territories of the same type and of the same structure as the Latin city states, the Greek and the Etruscan ones. This happened in the 4th - 2nd centuries, B.C. Gradually Italy became what it is now, a conglomerate of cities, which means city states.

At the same time Rome as the leading city began to develop, not into one of the allied city states, but into the capital of Italy. That is the fourth period in the life of Rome. First, you have a group of herdsmen; afterwards a city, one of the Latin city states; the third was the leadership among the Latin city states; and the fourth period was the leadership of Italy, Rome being the capital of Italy where political life of Italy was concentrated and where the great part of the commercial and social life was also concentrated; a very interesting period in the development of Rome. Rome as the capital of Italy had more or less the same aspect as Athens in Greece. Just the same. Athens was the center of a large maritime alliance; Rome was the center of an enormous and very strong alliance of land states, but both were centers of a state where the constituent parts were city states just the same as the leading city was. This alliance was a mighty and a very important factor in the development of the ancient world. You know the story. I have not to tell you the story or the history of Rome during the second century B.C., the first century, etc. You know that Italy under the leaderwhip of Rome became one of the most influential members of the balance of power of the Hellenistic period. Being an influential member of this society of nations, Rome, of course, being the most powerful of them and having a better constitution based not on an absolutistic monarchy, but on republican principles, had of course the possibility of dictating her conditions to the other parts of this society of ancient nations. Now of course the Greeks were not prepared to obey Rome. They were too proud of their civilization and too much convinced that they were stronger than Rome. That was the reason why one leading Hellenistic power after another tried to attack Italy and tried to make Italy serve the purposes of this leading state. First Macedonia; afterwards Syria; Egypt never tried it, because it knew how strong Rome was. In the course of these wars Asia Minor, the Balkan peninsula and the Near East gradually became dependent on Italy and at the same time Roman civilization proceeded. Well toward the end of the first century B.C. was formed the Roman Empire. The result was that Rome was the only leading empire in the world and Rome commanded all that was the civilized mankind of the ancient world.

You know that Italy formed the center and the leading part of this enormous and mighty empire, and that the other parts of the world were divided into provinces of Rome. It is more or less the same constitution as the constitution of the British Empire, - more or less the same. You have a central, but thickly populated land with a good constitution, with a national unity and

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dependencies more or less civilized, some entirely civilized, some not civilized, and some getting civilized gradually. First of all you have in Italy herself a central land populated by Roman citizens. Outside of Italy there were groups of Roman citizens, those sent out to form colonies, and trading people in allied cities and the provinces, but as a rule the Roman citizenship was concentrated in Italy. The first province annexed to Rome was Sicily, followed by Sardinia and Corsica; the next was Spain, next Africa, later on a large part of Gaul; in the Orient the first was Macedonia, and the next was Asia; and later one land after another was annexed to this net of Roman provinces until the boundaries almost entirely coincided with the boundaries of the civilized world. The only exception was the Orient, where the neighbor of Rome, the ancient Persian Empire (the Empire of Parthia), was a civilized and thriving state. In southern Russia Rome influenced the Greek cities of the shores, but it never possessed and never had any influence on central Russia or even on the steppes of southern Russia. The Balkan peninsula was almost entirely occupied and was divided from the Germans by the River Danube, the Rhine forming the northeastern boundary between the Romanized provinces of Gaul, and the Germanic tribes. In Spain and Britain the Roman Empire bordered the ocean, and in Africa, the desert.

Now, what is important for us to know and what I will try to explain next time, is how Rome dealt with these new provinces with no city life, except in the Oriental provinces and in some places on the shores of the Mediterranean in the West. About the second century A.D., almost all the western provinces and large tracts of land in the Orient had the same aspect as Italy in the third and second centuries B.C. They were transformed into lands where the cities were the dominating social, economic and political features. That led to the results of which I spoke at the beginning of my lecture, that is, the expansion resulting making France, Britain and Germany lands of cities; and it led at the same time to the result given in my first lecture, the contrast of city and country population. In my last lecture I will try to explain the features of city life in the Roman Empire, beginning with the first century B.C.; and I will try to show how the leading countries were transformed into countries where cities were the leading social element.

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Lecture 5,
February 28, 1922.

The Roman Empire. (Concluded)

I have told you how the city of Rome gradually became first the center of a league of cities in the small place called Latium; how gradually Latium, headed by Rome, became the center of Italy, transforming Italy into another league of cities and tribes; how Rome transformed gradually the tribes of this league into as many cities again. The next stage in the development of Rome is Rome as one of the powers which formed the balance of power during the Hellenistic period. I explained to you also how Rome, being the mightiest member of this league of nations of the Hellenistic period, began to dominate the balance of power and transformed what was the balance of power into a Roman Empire of which the center was the city of Rome. It was another Athenian league, but built on a sounder basis than the league of Athens was. You know, and I do not have to explain to you here - it would take too much time - that internal troubles, civil and social war in Italy herself during the first century B.C., did not check the domination of Rome, but transformed the internal structure of Rome, which was not adapted to the new conditions, into a new form of political constitution which was a compromise between the oriental monarchy and the Greek city state, just as the Hellenistic monarchies were such a compromise. But even in the new form, Rome remained the leading city of the new world empire of Rome; and it is not for nothing that the new world empire was not called the Italian Empire. Never would anybody think of speaking of an Italian world power. They spoke about the Romans as being the masters of the world and of the city of Rome as being the mistress, the ruler, the dominator which was obeyed everywhere by everyone. That is interesting again, showing you the leading part which was played by a city in this transformation of the ancient world into a world empire; it was achieved by the city state and not by an oriental monarchy or some league of cities. One city did achieve the world empire.

From the point of view of the history of cities, it is interesting to see how, during the centuries of development, the city of Rome has gradually assumed new forms of city life. First a modest refuge of shepherds, the city of Rome became afterwards one pf the cities of Latium, one of the oppida, a kind of intermediary between real city and a fortified refuge; how under the Etruscans the city of Rome assumed more and more the forms of a city state; how afterwards the city became a kind of capital of Latium and later on the capital of Italy; and how at that time it assumed almost the same forms that were assumed by Athens during the domination of Athens in Greece. But gradually Rome surpassed, so to speak, Athens. Rome was no longer the center of an Italian league of cities as Athens was the center of a Greek league of cities. It became the capital of the civilized world and, as you know, by means of a social and of a civil war, Rome was transformed into a monarchial capital

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of just the same type as Alexandria, Antioch, Pergamum and the ruling cities of Macedonia. It became the center of a civilized state with a Greek civilization, and at the same time a center of a large empire; and more than the cities of the Hellenistic world, it became the ruling city of the civilized world.

Now, that is a very interesting development in the form of city life at Rome. Rome was growing chaotically, as Athens had been, with the center, the Forum and the Capitol, and with one block of houses growing up after another. Without any system, only according to the topographical features of the city of Rome. It is the same growth as, for example, the growth of most of the medieval cities and, for example, the growth of Paris and London. It was chaotic and without system, and presented very few opportunities for comfortable living for the population of Rome. If you read the writers of the Roman Empire, if you read their description of the city of Rome, you will find that the city of Rome was really very uncomfortable, dirty, and not a good place to live in. Of course, the Republic had already provided Rome with one of the best water supplies which existed in the ancient world. This was comparatively easy to do because the neighborhood of Rome has very good water; and nowadays modern Rome is very rich in good water because about three-fourths of the aqueducts built for the Roman Empire are still used. Almost no new aqueducts have been built by the popes and by Italian kings. They almost always rebuilt the ancient aqueducts of the Romans, and rebuilt them only partly, and there are some still that are out of use. Rome has always been one of the richest cities in water in the European world. But except for the water very little was done for the city of Rome, from the point of view of municipal organization, during the time of the Republic.

Now the reason for it was the speculation of the Roman capitalists. Rome was a center of the economic and political life of the world. No wonder, then, that capitalism was quickly developing in Rome, and one of the most successful speculations was that in the city land of Rome and in buildings, large buildings, of the type of your skyscrapers. This was caused mostly by the fact which I already emphasized in speaking of the Hellenistic cities. The transportation conditions were very bad in the ancient world. You had only your own feet to get about on. The overcrowding of the cities was a certain result, so that in the best organized cities people were not allowed to drive in a carriage or to ride on horse back. Carriages were not permitted to circulate in the city, except carts for bringing in food stuffs, which were allowed in the city at night. Orders prescribed in Hellenistic municipal laws were similar to a very interesting municipal law published by Julius Caesar - Lex Julia Municipalis. This law we can still read. It shows many parallels to corresponding laws which we know from Alexandria and Pergamum, the first a new discovery, a roll of papyrus, bought by the Germans in Egypt. In the descriptions of the municipal law of Pergamum we find orders saying how to build the city as such, how to manage the streets,

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how to keep them clean. Everything is prescribed in this law of Pergamum, and it is just the same in the law of Alexandria. We suppose that such laws existed for every city of the ancient Hellenistic world, and just such a law was published by Julius Caesar and voted by the popular assembly of Rome, not only for Rome, but for all the cities of Italy. This law dealt exclusively with municipal matters. It tries to remedy all the evils which existed in the city of Rome, and one of the paragraphs dealt with the circulation of people in Rome. You could circulate only on foot.

The most important place in the city of Rome was the Forum with its temples, public buildings, large markets, rich shops, its exchange houses so to speak, the bourse if we use the French word, where all the transactions were carried out, and very important transactions they were, indeed. All were concentrated in one place and everybody tried to live as near as possible to the center of business, political and religious life, and of course all the wards near the center were occupied. At the same time the capitalists bought for enormous sums large places for building their palaces, so that a good piece of land was taken out of use for the common people for the use of the capitalists. So in the time of the Republic the hill of the Palatine, which was just near the Forum and accordingly in the center of the city, was entirely occupied by houses built by Roman capitalists. Here lived, for example, Cicero and many great persons of the same type. That means, you understand, that in the rest of the city there was an overcrowding by the enormous population attracted to the center of the city, and this gave rise to speculation. The matter is explained in an old but very good book of one of the best historians of the ancient world, Robert Pöhlmann, who was a professor of ancient history in Munich. He wrote a book Die Uberbevölkerung der antiken Städte, (The Overpopulation of the Ancient Cities). It gives a very interesting picture, which should be now completed in the light of the new discoveries and in the light of parallels existing between Rome and the Hellenistic capitals. When Pöhlman wrote in the 70's of the last century, not much was known about the Hellenistic capitals, but from the economic and social point of view it is a very interesting and a very good study.

As I have already pointed out, this situation led to speculation. Speculators, large capitalists, - for example, the famous Crassus, a member of the triumvirate with Caesar and Pompey, - would buy large parcels of land, would build one enormous skyscraper after another. I speak of skyscrapers, and I shall insist on calling them so, because from the point of view of the Roman technique, so far as it was possible to build without steam engines and electricity, it was just the most that could be achieved in building houses. Houses of six stories were quite common in Rome. This does not mean the same thing as in flat cities, because Rome was situated on "seven hills," as you know, so that sometimes the upper part of the house was two stories and the lower part of the house was six stories high. Such houses of many stories are

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described by many ancient writers, and catastrophes happened very often. These catastrophes were caused by inundations of the Tiber which still overflows Rome very often in the winter and spring. Now, of course, it does harm to the lower part of the city only, but in ancient times, when the course of the Tiber was not yet regulated, the floods of the Tiber were a great danger, and especially so because the houses were very badly built. Just from the point of view of speculation they were built as cheaply as possible, and of as bad material as was possible for the Romans. Although they built brick houses, these were as cheap as possible and without deep foundations. So it happened very often that during the flood many houses collapsed, with all the people in them. And it happened very often, too, that fires broke out. You all know about the fire in the time of Nero, who was accused of having kindled it, - Nero then accused the Christians. I do not know who was guilty. Probably neither Nero nor the Christians. Fires were frequent in Rome. Such was the city of Rome - chaotic in its growth, overcrowded and concentrated on a small strip of land, not organized except for the central parts of the city, and even the central parts of the city were entirely dependent upon the liberal gifts of the leading citizens of Rome.

Now, you know that later on, because of the civil and of the social wars, Rome was transformed into a kind of Hellenistic monarchy and became the capital of a large state. The activity of the emporers in transforming Rome into a Hellenistic capital, in rebuilding Rome on new lines, in transforming Athens into Alexandria, is remarkable indeed. Augustus entirely changed the aspects of the central parts of the city of Rome. He built it on new lines with beautiful buildings, buying up very many houses. His successors bought one block of houses after another and built new and beautiful buildings. But what is interesting is the fact that the result was an entirely new city of the type which is characteristic of the Hellenistic cities of the Greek world; that is, a Greek city with all the parts necessary for a Greek city. You remember that the Hellenistic capital was a combination of buildings necessary for the political, social, economic and religious life of the population, with a residence, the palace of the ruling man. After the civil wars Rome also got her master, her ruling man: princeps of emperor, as you like. Therefore, along with an embellished city with improved hygienic conditions intended to serve the needs of the population a large part of the city was covered by the large residence of the Emperor, occupying an entire hill of the city of Rome, the Palatine. So that the Palatine, in Latin palatium, became the name for palaces in all languages, except in Russia and the Slavic countries. In the Slavonic languages it is different; the name for the palace is dvorets. My parallel with Moscow as the last center of the oriental world is here complete. Because dvorets means "the court," i.e., the court of an oriental king. However, there was one - and a very interesting - difference between the cities of the Greek world and the city of Rome; even between the capitals of the

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Hellenistic monarchies and the city of Rome. The general type of the Greek cities and of Roman was almost the same, the leading temple on the Capitol, the market place and the center of public life - the Forum; a beautiful house for the senate, large houses for shows, theatres, amphitheatres. But there was one difference. You remember that in Pergamum, in Alexandria, even in the small cities like Delos, along with the buildings for the public life an enormous part was played by the buildings for the education of young people. Large buildings like our universities you find in almost all Hellenistic cities. But in Rome and the cities of the Roman Empire they disappeared and their place was taken by public baths, not only for swimming and bathing purposes, not only for the health of the body, but for other purposes also. The first thing that impresses you in Rome is the enormous size of the ruins of the bath. It is only the ruins which exist. Take for example the baths of Caracalla and Diocletian. The place which was occupied first by this bath of Diocletian is now occupied by one part of the building of the central railway station of Rome, by a large public place with a wonderful modern fountain, by many houses and shops, by the largest museum of antiquities in Rome built into the ruins of the bath, and by one of the most beautiful churches of Rome rebuilt by Michael Angelo, which had been one of the rooms of the bath. All this formed formerly only one large building. The thermae of Diocletian is an example of what were the other thermae built for the population of Rome. They were not only places for a swim or a bath. The Romans came to these places just as we come to clubs. As you come to a fraternity or to your clubs, so the population of Rome went to these baths. They were furnished with restaurants, libraries, reading rooms, open places for sports, etc. You could find everything here in the enormous baths. These baths replaced the educational institutions of the Hellenistic cities. The schools in Rome as late as the second century A.D. were entirely a private affair and were never cared for by the government. This is just the opposite of the rules prevailing in the Hellenistic cities.

Such was Rome! You see already that the conditions were almost the same as the conditions in some of the modern cities. And the best parallel I know is, of course, Paris. An ancient city growing up from a tribal center, growing up gradually, chaotically, afterwards the center of a mighty kingdom, and I should say the center of the civilized world, because Paris for a long time was the center of the civilized world and I do not know if it has not still a bit of this importance. This chaotically growing city with wonderful buildings like the palace of the kings, the market place near the Bastille, has just the same features as Rome before the Empire. But Paris, as you know, has had its Empire, too. Under Napoleon III it was entirely rebuilt, "Haussmannized," as they say. It is an odd, but a good word. What Napoleon and Haussmann did for Paris with the wonderful streets, parks, and boulevards, was done for Rome by Augustus. Of course, Napoleon took only the paths devised to him by the Roman emperors. Napoleon III was dealing only with something prepared

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by Napoleon I. He only Haussmannized Paris. In Rome you will see how thorough was the work of rebuilding. Such was the city of Rome!

Now, the Roman Empire existed for centuries and centuries, and I should say it was never destroyed. It never ceased to exist. Many imagine, of course, that the barbarians destroyed the Roman Empire, but that was never a fact, Rome was never destroyed. Rome continued to exist. Of course, it was after a time no longer the political center of the world, but it was still the leading spiritual center, and the pope was just the successor of the Roman emperors. And, of course, from the political point of view the idea of a sacred empire shifted to France, Spain, etc., but it never died. And about the same time, in the second capital of the Roman world, Byzantium, the name of Rome existed and the population of the Byzantine Empire called themselves Romans; and so you see the whole organization of the Roman Empire existed as long as the 15th century. So the Roman Empire existed for centuries and centuries. The most brilliant time of the Roman Empire was the first three centuries, especially the first and second A.D. The most brilliant work of the Romans was done during these first two centuries.

From the point of view which interests us what was done by Rome as an empire ruled by one man who was gradually transformed from a leader of the citizens of Rome to a tyrant whose power was based on military force and then into a real monarch of the oriental type? What was done by these men from the point of view which interests us? I should say they did just the same as the Hellenistic monarchs beforemthem. They tried to transform large tracts of imperial land into territories of cities, and the greatest work in this respect was done by them in the western provinces. The eastern provinces were already partly transformed into large territories of cities, and were already populated by cities built one after another by the Hellenistic rulers in Asia Minor, in Syria, in central Asia, even in Egypt. And Greece was, of course, a land of cities from time immemorial. Italy was also a land of cities. Almost no territories which did not belong to the cities existed in Italy; but the rest of the western world still lived in conditions which had nothing to do with the Greek city state. Tribal life was the leading life in western Europe and remained the leading life in Germany and in the Slavonic world. But the Celtic world and the Thracian world - France, Spain, England, and what was before the war Austria, were transformed by the Romans on the same lines that were followed by the Hellenistic monarchs for the Orient. The western provinces became lands of cities as well. Take, for example, Africa, where only a few Phoenician cities exited on the shores before the Roman dominion. After one century of the Roman rule in Africa it was covered with scores, hundreds of Roman cities, and the type of these cities was the same as that of the Italian and Greek cities. It offered to the inhabitants the most comfortable and hygienic life. The scientific devices of

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planning the cities, of building public and private buildings were carried out in all the cities.

Now, let me describe to you the main lines on which this work of implanting the Roman city in Western Europe was done. The most important carriers of city life were the soldiers, the Roman legions. First they built camps. Now the camp was the center of life for the soldiers only, but the soldiers, as soon as the camps became permanent fortifications to protect the frontier, attracted to the camp some shopkeepers, artisans, etc. etc., who settled down near the camp. Some of the soldiers married or took concubines and built for them houses in the neighborhood. In this way a city was growing up around the camp, the so-called "canabae." They grew richer and richer, larger and larger. They needed a territory to support their population. The Roman emperors granted them the territory and gradually transformed them into real cities, having all the rights of a city, i.e., their own magistrates, their own finances, self-government, etc., like the different types of the Italian cities.

The second type was that of a city formed as the administrative and economic center of the tribes in Gaul and in Spain. These tribes had always some refuges and some market places in a well protected spot. These refuges were situated (and there are many excavated by the French) almost always on tops of hills and mountains. Now the Roman emperors created such a life that peace reigned all over the provinces of western Europe. The legions on the frontier, building up cities, protected by this civilized zone the lands of France and Spain against attacks from the outside. The same was done in Britain in building the well-known armed frontier, the British Wall. So under the protection of the troops, of course, there was no need any more to climb a steep hill to get your shopping done, and there was no more reason to look for a refuge, because life was safe. So these eagle nests came down to the plain, and regular cities were built under the incentive given by the Roman government, which insisted on having one or more political centers for each tribe or nation. One of the cities was Paris, the center of the tribe of Parisii, and most of the names of the leading cities in France are names of tribes. As you see, gradually the tribes got a political center, and this center grew into a large and civilized well built city under the protection and with the help of the Roman emperors and the Roman governments. In this way Spain and France and Britain also became territories of towns, also territories of cities. Of course, the territories were very large indeed, because the tribes had very large territories, so that they formed a kind of little state. Another type of policy was assumed by the Romans in Africa, according to the circumstances which prevailed in this land. I have spoken of this already. This land of prairies and of nomadic shepherds, still now to a great extent a land of the same type, was, by the constant efforts of the Romans, transformed into a flourishing conglomerate of cities. I will illustrate all that I have said

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about these two types of cities next time. In western Europe and in Africa I will show you graphically what I mean by all this implantation of city life in the countries which did not know anything about cities.

Before finishing my subject I will draw some conclusions. Of course, my characterization of the economic and social conditions connected with the cities in the ancient world gave you an impression - and a right one, which I tried to produce, - that the ancient civilization and the ancient state were mostly city civilization and city state. Such is the aspect, certainly, of the Greek states, and, no doubt, of the Italian, of the Roman state. But you must not forget that that was only the upper life. That beneath, you have another type of life, which was not interesting for the ancient writers, which was just the basis, the foundation of the economic and social life, but was at the same time a type of life for which nobody cared, because everybody cared for the cities. Nobody cared for the country population on which the cities grew up and which formed, so to speak, the ruler of city life. Now, part of these lands were populated by peasants, part by serfs who belonged to city territories and formed the foundation of the city territories. But you remember that the oriental countries, large as they were, much larger than Greece and Italy, never knew a real city life. The political life, the social and the economic life of the oriental countries was always based on the main rural population, on the population of the peasants, and the expression of this idea that the peasants formed just the center and the main foundation of the state was the absolutistic monarchy of the oriental life. In Greece and in Italy the city territories, the leagues of cities dominated from the very beginning. During the Hellenistic and the Roman period, cities of the Greek types were implanted in the Oriental lands. It seemed as if the Orient too was gradually transformed into a complex of city-territories, but it was not so. The cities covered perhaps one-hundredth of the large spaces of the Orient. As before, the Orient remained the land of peasants and the land of monarchs when the Roman emperors were greeted by the Orient as the successors of the Assyrian, Babylonian and Egyptian kings.

Now, in the West you have almost the same thing. Not the small territories, with cities which grew up organically out of the territories, as in Greece and Italy. No! You have artificial cities with enormous territories populated by people not taken in by the ancient Greek and Roman civilization, people who remained just the same peasants and serfs that they were before the Roman domination. If you take the whole of the Roman Empire you will see that except Greece and Italy the cities form the upper layer only; but they are very talkative, everybody sees them. Peasants are silent, nobody mentions them, except, you see, <u>en passant</u>; but they form the masses of the population and they see that the cities are exploiting them, living at their expense. And this feeling of which I spoke, the feeling of a kind of contrast between

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the cities and the country was growing, as time passed, in the Roman Empire, where of course the emperors based their power almost exclusively on the city. Nothing explains why in the third century comes a social upheaval that almost destroys the Roman Empire. Scores of emperors proclaimed by the troops fight each other in a political hell for no reason. Why was it? I say it was the fight of the country population, which formed at that time the armies of the Roman Empire, against the cities. That was the fight of the country population against the city population. The fight of the peasants against the men of the city who exploited them and lived at their expense. And if the Roman Empire in the third and fourth century under Diocletian and Constantine was transformed again into an oriental empire built upon the same foundations as the ancient Oriental empires, it was because the emperors realized this state of things and founded their power again on large masses of the peasants, degrading the city population to the level of the country population, making out of them the same servants of the state as the peasants always were in the Oriental world.

Such is the history of the cities in the ancient world. Of course, this is only a brief sketch. It requires more time than is at my disposal to give a good idea of the conditions, but I hope you will retain from my lectures one main point: How important it is for the evolution of the modern world to know the development of the cities in the ancient world.

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INSTITUTE FOR RESEARCH IN LAND ECONOMICS

URBAN LAND ECONOMICS

Urban Land in the Middle Ages

by

Mary L. Shine, Ph. D.

Institute for Research
in Land Economics.

"UNDER ALL, THE LAND"

"My own conviction has long been that the land question far transcends any restricted field of economics and that it is fundamental to national survival and national welfare. It is truly a problem calling for statesmanship of the broadest type." - Professor Frank A. Fetter.

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by

MARY L. SHINE

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URBAN LAND IN THE MIDDLE AGES

Introduction

In discussing the antagonism between city and country in one of his early lectures, Professor Rostovtzeff told us that, beginning with the third century of our era, country began to overwhelm city. The Roman cities were already declining when the barbarian hordes swept over Europe, inundating the Roman provinces, which have been described as conglomerations of cities, with a population which had not reached that stage of civilization which expresses itself in city life. The life they preferred and continued to maintain was a country life with the village as its most concentrated unit.

However they were not maliciously destructive and had no desire to destroy a civilization that they rather admired without wishing to adopt it. Cities that fought their advance were conquered in conflicts that were destructive, but cities that offered no resistance were allowed to continue their existence, and the ruins found in them to-day are often the result of later wars between factions of their own citizens or of other wars in which the cities took part, and not the work of the barbarian invasions of the fourth, fifth, and later centuries.

Some of these surviving Roman cities continued an unbroken city life, but many of them fell into more or less decay. There has been much controversy among historians as to whether medieval cities on the sites of old Roman towns were survivors or whether the Roman towns had died and had been born anew about the year 1000. The lack of contemporary accounts of the towns from the seventh to the eleventh century makes the question one that cannot be solved.[1] Some of the Italian cities, undoubtedly, had a continuous city life. Some of the cities of Roman Gaul and the Roman cities of the Rhine continued to exist as cities, among them Paris, Bordeaux, Strassburg, Cologne and Mayence,[2] and also some of the towns and camps of Roman Britain.[3] It is probable that the thing which survived in these places was the independent economic life, and that their powers of municipal self government were swept away,[4] for there does not appear to have been a survival of Roman municipal institutions to any great extent. Luchaire feels that the Roman origin of the municipal institutions of the French communes has not been proved for even the southern part of France - the most highly Romanized section.[5]

Many of the old Roman cities that survived declined in importance, in population, and in area; and when they emerge in

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1) Achille Luchaire, Communes Francaises a l'epoque des Capetians Directs (Paris, 1911), p. 11.
2) William Cunningham, Western Civilization (2 vols., Cambridge, 1898-1900), II, 58.
3) J.E. Thorold Rogers, Six Centuries of Work and Wages (New York, 1884), pp. 102-103.
4) Cunningham, Western Civilization, II, 58.
5) Luchaire, 12, 13.

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the Middle Ages we find that a small portion of the Roman city has been walled and fortified by a little group of people and has become a medieval town not at all comparable in importance, in size, or in population with the Roman city that had been on the spot in former times.[6]

I - Rise of the medieval towns.

A. When? Our first records of the medieval towns are in the eleventh century. Pirenne says that the first mention of burgesses (or townsmen) in the Empire was concerned with the town of Huy in the Bishopric of Liege in 1065.[7] In the twelfth century the boroughs, or towns, first began to have an independent municipal history.[8]

B. Why? Why did the towns appear at this time? It is probable that the grouping together of people in one place had begun much earlier. The barbarians of the earlier centuries were no longer barbarians, and civilization was developing - the growth of cities is, as Professor Rostovtzeff has shown, a necessary condition of civilization. The softening of the rough life of the barbarians, the rise in their standards of living, the demand for commodities, brought about a need for trade; and the widening of acquaintance with commodities for consumption that was the result of the movement of people about Europe and toward the East during the Crusades, gave speed to the development of commerce that had already begun. Cunningham says, ".....It may be impossible to say whether trade called forth a town, or whether the presence of a town gave the opportunity for trade,.... the existence of a town and the existence of internal trade are inseparable; the progress of one would stimulate the increase of the other."[9]

In order to understand the rise of a town it is necessary to understand the system of land tenure which prevailed in the Middle Ages. When the barbarian conquerors settled down, the land in these places was taken into possession, and parcelled out in tracts of various sizes among the chief men on condition that they return for it certain military service. This military service, in the case of a great noble possessed of one or more large tracts of land, was not his personal service alone, but the service of so many knights fully equipped, the number being proportioned to the amount of land held. The lords managed this by letting out portions of the land they held to others with the agreement that

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6) W.J. Ashley, Surveys Historic and Economic (London, 1900) p. 179 (abstracting Flach, Origines de l'ancienne France).
7) Pirenne, Dinant, p. 18, quoted in Green, Town Life, I, II.
8) Mrs. J.R. Green, Town Life in the Fifteenth Century (2 vols., New York, 1894) I, 11.
9) Cunningham, Western Civilization, II, 56, 57.

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these sub-tenants or sub-vassals should provide a certain number of men for the military force required of the great noble or tenant in chief. The sub-tenants sometimes repeated this process. This whole system of land tenure was called the feudal system. None of these men worked the land they held. The work was done by the peasants, who were also allotted strips of land for their own use, in return for which they worked so many days a week on the part of the land the feudal holder kept for himself - giving additional days' work at certain seasons and giving other occasional services. This system of cultivation of the land is called the manorial system and is sharply distinguished by the modern historians from the system of land tenure described above. The feudal system was a system of land tenure; the manorial system was a system of land cultivation.

The cultivators of the soil lived in villages - they had no farms, but were assigned from time to time certain strips in the common arable fields, and had the right to pasture certain animals in the common pasture, to cut wood in the common forest, and other privileges.

C. What? Living in villages that prospered and developed, they might in time desire to become a town. Gibbins says (Industry in England) that a town was in itself a manor or group of manors where men lived closer together than elsewhere.[10] But when we speak of the town we usually mean more than this - we mean the community with its privileges, its membership, its self dependence, and self control, that constituted the medieval borough or commune. Luchaire says that the commune was born because of the need of the inhabitants of the town for the substitution of a limited and regulated exploitation for the arbitrary exploitation of which they had been the victims.[11] Towns were marked off from villages by certain characteristics - they were fortified - usually by a wall and ditch; they were collectively instead of individually responsible for the payments due to the feudal lord and the taxes due to the king; and, therefore, the officials of the lord had no reason to invade the town, which settled its own affairs in its own courts and was free from the duty of attending the court of the feudal lord,[12] or in England the hundred and county courts.[13] for suits concerning matters within the town.

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10) H.de B. Gibbins, Industry in England (New York, 1897), p. 86.
11) Luchaire, 14.
12) William Cunningham, Outlines of English Industrial History (New York, 1898), p. 46; Sir Frederick Pollock and Frederick W. Maitland, History of English Law (2 vols., Cambridge, 1895), I, 627.
13) Edward Potts Cheyney, Industrial and Social History of England (New York, 1910), pp. 57, 58.

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D. How? Luchaire believes that these privileges were at first wrested from the lords by insurrections, but by the twelfth century the hostility of the lords had ceased and the enfranchisement was achieved by purchase - a goodly sum being paid for it.[14] The heavy expenditures of the crusading lords in the twelfth and thirteenth centuries often led them to secure funds in this way and hastened the growth of the towns. The kings found that in their conflicts with unruly vassals the towns could be played off against the nobles, and the favor of the king was a great factor in the enfranchisement of towns.[15]

E. Importance as trading units. English towns secured from the kings exemption from tolls throughout the king's domain, and the upholding of this right to be exempt from tolls was one of the chief functions of the gild merchant, which in the early days included practically all the citizens and through its collective power secured to each individual merchant the rights that had been given. Retaliation was a most powerful weapon for this purpose - if a town, A, denied to the merchants of another town, B, the exemptions that belonged to them, merchants of B that came within the clutches of A would be punished whether or not they had any responsibility for the offense.

Towns in the Middle Ages had relations with each other similar to the international relations of to-day - a person from another town was a foreigner. International trade as we know it did not exist - one did not think of German trade with England, but of the trade of Lübeck, let us say, with London or Bristol - the town was the unit.

F. Population. The population of the English town was fairly homogeneous - merchants, artisans, people who had been serfs of the nobles, but who now were free from any service and who paid collectively, not individually, what was due to the noble in money. In France clergy and nobles often resided in the towns and constituted a non-citizen class, exempt from the responsibilities of citizens and taking no part in the citizen life.[16] In Italy nobles lived in the towns and took active part in their affairs, and to this circumstance much of the turbulence of the Italian city life in medieval times was due.[17] On the continent of Europe a nobility of wealth rose among the merchant class also, which often controlled the town in an oligarchial government.[18]

II - Land Selection

A. Site.

1. Qualifications. When the new medieval towns began to appear, there were two chief principles that determined the choice

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14) Luchaire, 15, 16.
15) Cunningham, Western Civilization, II, 91, 92.
16) Luchaire, 61, 62.
17) Lynn Thorndyke, History of Medieval Europe (Boston, 1917) Ch.17
18) Cunningham, Western Civilization, II, 92.

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of site, 1) opportunity for trade, 2) protection.[19] While the second consideration was a necessary condition of the existence of any town, in those days when peace and order were far from being a matter of course, protected places did not always become towns. Of the places where protection was possible, only those which also offered opportunities for trade became the sites of towns.[20] Pirenne says, "towns are the work of the merchants."

2. Possible sites. There were several places that offered these qualifications. First there were the surviving Roman cities or camps, some of which had had a continuous municipal life through all the intervening period. Examples on the continent of Europe were Cologne, Mayence, Strassburg, Paris, Bordeaux[21] and a number of Italian cities, and in England, London, York, Chester, Colchester, Exeter, Lincoln, Bath, Gloucester and Cirencester.[22]

In these places the habits of economic independence had never disappeared, even when municipal self-government had been swept away; and these emerge again as medieval cities.[23] Second, there were the ruined remains of the old Roman cities and camps. The inhabitants of these places had sometimes gathered together more closely, and had fortified small portions of the old city area. This is called the castrum or civitas in early medieval documents. Outside of this grew up, in the eleventh century, one or more boroughs. These united with the fragment of the old city and formed by the union a new city - medieval - not a descendent of the ancient city.[24]

A third site that offered both protection and opportunity for trade was the monastery. Towns often grew up here due to the presence of the negotiators or business agents of the monasteries. These were not dependents of the monasteries, but had to buy their own supplies, and thus provided an opportunity for trade that drew population to the place. The population was also increased by those who sought the protection of the monastery, by pilgrims who resorted to it, by alien merchants who visited it, by artisans who served it and served the town.[25] The word "saint" as part of the name of a French town often indicates monastery origin, and English examples of towns growing up near monasteries are Oxford, Abingdom, Reading, St. Albans, Coventry, Durham [26] and many others.

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19) Clive Day, History of Commerce (New York, 1910) p. 42; Pierre Clerget, "Urbanism" in Annual Report, 1912, Smithsonian Institute (Washington, 1913), p. 658.
20) Ashley, Surveys, 196 (quoting Pirenne); Cunningham, Western Civilization, II, 62. (quoting Flach and Pirenne).
21) Cunningham, Western Civilization, II, 58.
22) Frances Pierrepont Barnard, Editor, Companion to English History (Oxford, 1902), pp. 188ff.
23) Cunningham, Western Civilization, II, 59.
24) Ashley, Surveys, 179 (abstracting Flach, Origines, etc.)
25) Cunningham, Western Civilization, II, 58.
26) Rogers, Work and Wages, 103.

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The fourth kind of a site was the neighborhood of a castle. This did not offer as great opportunities for trade as the monastery, but it had the advantage over the latter in the matter of protection.[27] Homes were needed for the soldiers and for the artisans who supplied the needs of the castle. The castle chapel often served as the parish church, the market established by the lord of the castle attracted trade, the castle walls afforded protection when needed.[28] Such origin of French towns is indicated by names that contain the words chateau, chatel or chatillon, roche, ferte.[29]

Fifth, we find the site selected for its advantages in trade and providing its own protection. Such spots were often places where a break in the transportation of commodities was necessary, where goods had to the trans-shipped - at sea coasts and river crossings, or at intersections of land routes. There merchants would naturally stop to rest and to exchange wares.[30] Examples of such towns were Southampton (which migrated from the Roman Clausentium), Bristol and Norwich in England.[31]

A sixth site was the fishing village, which offered opportunities for trade that developed the later towns. English examples of towns that rose from fishing villages are Yarmouth, Grimsby, Scarborough.[32]

3. Meaning of "advantages for trade." The advantages in trade afforded by the site of the town were only advantages for local trade in many cases - the amount of trading that was done between city and city was comparatively small. The town was a self sufficient economic unit. It had no great need for communication with the outer world - that was a luxury rather than a necessity.[33] The town had the monopoly of the trade of the country round about - the people of the surrounding districts had to bring their products to the town market for disposal[34] and the merchants who dealt in food products were the first to acquire wealth.[35] Trade between towns was, however, carried on, and the privileges of merchants trading in other towns were carefully guarded by the merchant gild.[36] Foreign trade was more important than trade between towns of the same country, the products of which were too similar to create a great demand for exchange; but this foreign trade was a trade between cities, and when collective

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27) Cunningham, II, 59.
28) Ashley, Surveys, 181 (citing Flach, Origines).
29) Ibid.
30) Day, 42.
31) Rogers, Work and Wages, 104.
32) Ibid, 104.
33) Ernest Belfort, Bax, German Culture Past and Present (London, 1915), pp. 131-132.
34) Pollock & Maitland, I, 634.
35) Green, Town Life, II, 60.
36) Pollock & Maitland, I, 650.

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control came in, it was control by associations of cities, such as the Hanse - the great league of German towns.

B. Amount of land selected. The amount of land included in the town was small - no large area was needed to house the population of even the greater towns. London had in the thirteenth century probably not more than 25,000 [37] - at the beginning of the fifteenth century probably about 40,000.[38] York and Bristol had perhaps 10,000 each in the thirteenth century [39] and 12,000 by the beginning of the fifteenth century.[40] In the last centuries of the Middle Ages famous towns like Nuremberg and Strassburg had not over 20,000 inhabitants,[41] Frankfort had scarcely 10,000.[42] According to Ashley only ten towns in England had more than 5000 people at the beginning of the fifteenth century.[43] The areas occupied by the towns were correspondingly small. Of the English town area I have found no figures, but Nuremberg covered about 340 acres, Strassburg, 193 acres - these being large and important places as we have seen by the figures for their population. Eberstadt, speaking of the German cities, estimates the average size as 60 - 120 hectares - about 150 to 300 acres.[44]

It has often been stated that the small area of the town was due to the necessity of enclosing it with a wall, and that the inhabitants lived crowded within the walls. Eberstadt says, speaking of German cities, that this was true only of a few early settlements, that there was room inside the walls to provide the citizens with gardens, that there were open extra spaces needed to accomodate the people who came into towns for protection in time of war, and to provide for feeding the inhabitants in time of siege, when their supplies from the outside were cut off.[45] Frequent expansions took place. Often a new wall was built to include the new territory and the old one was allowed to remain.[46] The building of new walls was not a great undertaking - the fortifications were neither expensive nor difficult to construct. Between 1200 and 1450 Strassburg had four such expansions [47] - Cologne until 1882 included no more territory than it had included in the expansion of 1180 - 700 years before. Great expansions took place in Worms and Basel in the thirteenth century, while Magdeburg had taken in as much territory to the south and west in 1100 as it contained in 1870.[48] Cunningham has noted similar expansions, after the crusades, in the English towns

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37) Cheyney, Ind. & Soc. Hist. 57.
38) W.J. Ashley, An Introduction to English Economic History and Theory (2 vols., New York, 1894), II, 11
39) Cheyney, 57.
40) Ashley, Ec. Hist. II, 11.
41) Day, 45.
42) Ibid.
43) Ashley, Ec. Hist., II, 11.
44) Rudolf Eberstadt Handbuch des Wohnungswesens und der Wohuungsfrage (Jena, 1910), p. 36.
45) Ibid, 29.
46) Ibid., 35.
47) Ibid., 36.
48) Ibid, 29, 30.

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of Bury, Norwich and Peterborough.[49] There was at the same time an emigration, from English towns, of wealthy burgesses, who bought country estates and sought to establish themselves in the ranks of the country gentry.[50]

C. Selection of land inside the town.

1. Public. Selection of land inside the town must be considered in two parts - selection of the public land - streets, markets, etc. - and selection of private land. The market place was usually a centrally located square or rectangular open place in which was often found a market cross[51]. Near the market place were the church and the common hall - sometimes it was the town hall, sometimes a gild hall, sometimes both existed. In small towns the churchyard might be the market place and the church itself might serve as the meeting place for the community.[52]

The streets that formed the sides of the market square were cardinal or main streets of the city and usually they led to the four gates of the city.[53] Sometimes parallel main streets ran through a city joining at their ends near city gates - sometimes the main streets were bent to follow the direction of some road that led through the city.[54]

Leading off from these main streets were the side streets which divided the building land of the towns into suitable tracts. While the main streets were moderately wide and fairly direct, these side streets were narrower and were often crooked or bent in direction, because they were constructed by private land owners who were dividing their land to increase its value as building land. They were sometimes bent to correspond with the boundaries of the privately owned land.[55]

Both the main and the side streets might show variations from the right angled system even in cities whose plan was rectangular, for topographical reasons - the medieval builder usually adapted his plans to nature instead of forcing nature to the plan. Hpwever, this adaptation was not made without consideration for aesthetic effect. Eberstadt says that the medieval builder sought a picture changing step by step as the pedestrian proceeded through the street, rather than a distant

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49) Cunningham, Western Civilization, II, 92.
50) Ashley, Ec. Hist., II, 54.
51) Frederick W. Ticknor, Social and Industrial History of England (London, 1918), 66; Gibbins, Industry in England, 96.
52) Ticknor, 66, Green, I, 153-155.
53) H. Inigo Triggs, Town Planning (London, 1909), pp. 75, 76.
54) Eberstadt, pp. 37-39.
55) Eberstadt, 37-40; Day, 45-6.

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perspective.[56] In those medieval cities that were completely planned by their founders, the side streets as well as the main streets showed regularity.[57]

2. Private. All privately owned land in the city was used for residence purposes, for the medieval man did not have separate places for business and for residence, but pursued his occupation in his home. The merchants naturally chose houses along the main streets where there would be most frequent passage of buyers.[58] The artisans of like kind often settled together in certain streets so that there was a localization of industry. This was due partly to regulation, partly to the needs of the industry. Dyers, tanners, wool washers, fullers, settled along a water course so that the waste water used in their industries might be carried off - often in order to protect the water from pollution they were prohibited from settling in certain sections. Weavers, cloth makers and similar industries were found near together, probably due to the convenience of common arrangements.[59]

Unlike our modern city with its residence districts, its business districts, its manufacturing districts, in the medieval town all districts were residence districts. In this residential area, in some streets were found residences which were also the business places of merchants, in other streets were residences which were also workshops of craftsmen.

There were, however, zones in these cities which were set off for other reasons. The Jews lived in districts by themselves apart from the other inhabitants.[60] Foreign companies of merchants often secured rights to certain quarters in the towns, which they enclosed and shut off from the rest of the town, and in which they lived under their own laws instead of the laws of the town.[61] An example of this was the Steelyard in London.

III. Ownership of Land.

A. Private.

1. Original. The original owners of the land in towns were the same as in the country[62] - the king, the nobles and the clergy - if indeed we can speak of ownership at all at this time. In the feudal system many persons had rights in any piece of land, but there was no such thing as absolute ownership of it. Though at the close of the Roman period there had been many people in both

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56) Eberstadt, 40.
57) Ibid., 38, 39.
58) Ibid., 57.
59) Eberstadt, 57; Clerget, 658; others also.
60) Gibbins, 103.
61) William Cunningham, Growth of English Industry and Commerce (Cambridge, 1890), pp. 181, 182.
62) Wilhelm Arnold, Geschichte des Eigenthums in den Deutschen Städten (Basel, 1861), p. 8.

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town and country possessed of allods, most of these had disappeared during the intervening period. Many of these allodial holders of land went over into an unfree state, giving their land into the possession of lord or bishop or monastery and receiving it back in feudal tenure from him.[63] This transfer was often made voluntarily, with the motive of securing the lord's protection. The land was then held by its former owner in return for services or rents.

2. Burgage tenure. As the Middle Ages advanced, payment of money rents became much more desirable, from the point of view of the user of the land, than payment in services, which were often demanded at inconvenient times - when the tenant most needed to work on his own land - and in amounts that were not so narrowly determined that the tenant could not be exploited by the lord's agents. The people in the rising towns often managed to secure a commutation of all services into money rents even before they secured their charters.[64] This free tenure for a money rent was called in English burgage tenure from burgus the low Latin word for borough or town; and similar terms with similar meaning are found in French and German.[65]

What was the content of the right of burgage tenure? Pollock and Maitland in the History of English Law, speaking of the right as it existed in England, include (1) freedom from all services, which were commuted into a fixed money rent, 2) the right of passing on the land and buildings (or tenement as they were called together) to an heir, to be held on the same terms, 3) the right of selling the tenement to another who will hold on the same terms. Some of these things were enumerated in charters, but they seem to have been more often a matter of custom than an express grant.[66]

3. Firma burgi. When the land belonged to the royal domain, or entirely to one of the feudal lords, the townsmen could secure still further independence through the firma burgi, by which the town received the right to be the rent collector of the great land owner, substituting collective responsibility for individual responsibility in the matter of rents.[67] They no longer went to the lords or kings court to transfer their tenements, but to the town or borough court, and the right of the lord over the tenement becomes still more remote[68] he is now a mere receiver of fixed ground rents. As time went on and

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63) Arnold, pp. 8-13 (and many other places).
64) Pollock & Maitland, I, 629.
65) Ashley, Surveys, 199 (quoting Pirenne).
66) Pollock & Maitland, I, 629, 630.
67) Ibid., I, p. 276; and others.
68) Ibid., I, 630.

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money became less valuable, these fixed rents became hardly more than nominal,[69] and even at that there were frequent remissions of rent lavished on the boroughs in the later period when nobles and kings were striving for supremacy.[70]

4. Courts. Even when the land in the town had been originally held from several different feudal lords, the formation of the borough courts enjoying royal franchises had the effect of reducing the lords' rights over the land to a mere right of receiving rent. English kings in establishing such courts often ordained that none of the townspeople could be held answerable for their tenements within the borough in any other court.[71] Cheyney says that burgage tenure was the nearest to actual land ownership that existed during the Middle Ages.[72]

In English towns possessing the firma burgi the rent was paid to the town officers who were responsible for its collection. These were by no means easy masters, for in certain English towns, if a man failed to pay his rent for the king's ferm, "the doors and windows of his house were taken off, every one in it turned out, and the house stood empty for a year and a day or even longer before the doors might be redeemed in full court, or before it passed to the next heir."[73] On the other hand, the English burgess was often given additional security in his tenure by the charters sometimes secured from the king, stating that if any one who holds a tenement in the town for a year and a day, the claims of every person to that tenement shall be barred, unless the claimant was in prison, under age or beyond the seas.[74]

5. Explanations of rise of burgage tenure. English writers on the subject of burgage tenure have not shown the interest in working out the reasons for the rise of this system, that is manifested by the French and German scholars. The French writers, Pirenne and Flach have considered the point, with the result that Pirenne attributes it to the passing over of the personal privileges of freedom possessed by the merchants to the tenements which they held;[75] while Flach has seen the system as developing from the privileges granted by lords who wished to attract residents to the villages on their domains.[76]

The German investigator, Wilhelm Arnold, has with painstaking thoroughness gone back to the ultimate sources of information in this subject - the records of deeds and transfers

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69) Ashley, Surveys, 192 (quoting Varges).
70) Green, Town Life, I, 27.
71) Pollock & Maitland, I, 629, 630.
72) Cheyney, Indus. & Social Hist. p. 59.
73) Green, Town Life, I, 141.
74) Pollock & Maitland, I, 632.
75) Ashley, Surveys, 197-199 (abstracting Pirenne).
76) Ibid., 183 (quoting Flach).

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of landed property in the thirteenth, fourteenth and fifteenth centuries. He believes that the transition from a feudal tenure to the free tenure which was so much like complete ownership, was due to the principle of Germanic law that distinguished between property in land and property in buildings on that land, which superseded the principle of Roman law that gave to the land owner ownership of any improvements that might be put upon it.[77] Arnold recognizes three stages:-

(1) Lord as owner, tenant has merely possession.
(2) Lord and tenant have like rights due to the separate ownership of land and buildings.
(3) Property belongs to the tenant - the lord has only a fixed ground rent changeable neither in amount nor in times of payment.[78]

Documents examined by him indicate that the first stage still prevailed in German cities in the thirteenth century, the fourteenth century saw the development of the second stage,[79] and the fifteenth century, the accomplishment of the third.[80] Eberstadt, another student of German cities, believes that these changes came about through the need for securing the best utilization of the land. He says that while the whole agrarian system of the time rested on the indivisibility of the land, city life required divisibility for the furnishing of all citizens with land and for its best utilization, and that the difficulty was passed by the devise of leasing the lot for a fixed rent to a tenant who had unlimited control of the land as long as he paid the rent, who had ownership of the buildings he put upon the lot, and who could pass both leased lot and buildings to his heirs.[81]

6. Landed property qualification for citizenship. The possession of landed property was thus not difficult to attain.[82] In the English towns probably from the beginning artisans had burgage tenements, but Arnold finds that in the German cities the artisans or hand workers did not hold landed property until the end of the thirteenth century.[83] This ease of acquiring burgage tenure was the more important because the privileges of citizenship were bound up with the holding of land. Full citizenship depended primarily on the possession of a house and land within the town limits.[84] Sometimes new citizens were required to buy houses within their first year.[85] This was not surprising at a

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77) Eberstadt, 44 (summarizing Arnold): Arnold, pp. 258-288 ff.
78) Arnold, 258.
79) Ibid., 272, 273, ff.; 277-281.
80) Ibid., 286 ff.
81) Eberstadt, 43, 44.
82) Ashley, Surveys, 192 (citing Varges).
83) Arnold, 31-33.
84) Cheyney, 59; Ashley, Surveys, 205 (abstracting Keutgen), 216; Ashley, Ec. Hist. II, 23; Cunningham, Growth, etc. 95; Luchaire, 56, 57.
85) Luchaire, 56-7.

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period when political institutions were so completely bound up with the feudal system of land tenure. No doubt it would not have occurred to the medieval townsmen to include as responsible citizens the landless men. Nor would it have been altogether reasonable, for the land holder was the bearer of municipal burdens - he paid "scot and lot" with his fellow townsmen, he shared the common burdens and earned the privileges that he possessed,[86] and these privileges he guarded carefully against the intrusion of outsiders.[87] Sometimes indeed the burdens overbalanced the privileges, and in the French towns where nobles and clergy were also residents, without taking part in either the burdens or privileges of citizenship, we find occasionally that townsmen try to escape the burdens by qualifying as "clerks," and at other times there were regulations to oblige all inhabitants who had houses in the town to become members of the communal association.[88] However, as time went on this situation changed somewhat. The amount of land required for citizenship decreased. In Liverpool in the fourteenth century it was one eighth or even one forty-eighth of what it had been originally. In some towns the son of a citizen might become a citizen before he inherited his father's property.[89] The owners of burgage tenements might let houses to artisans, who would achieve citizenship without the possession of burgage tenements by membership in the craft gilds.

Before or during the fifteenth century a complete change took place. Citizenship came to be associated with membership in the gilds, and the town council was itself, in whole or in part, composed of representatives of the gilds. An association of persons as persons had taken the place of an association based upon land.[90] Long before municipal or even gild life began to decay it had done an important work, politically and socially, by recognizing persons as standing for themselves and not tied to the land or depending on a superior lord. "Land was no longer the basis of everything: a new social and economic form had appeared, and slowly, but surely feudalism began to give way before it."[91]

B. Public. Where the English boroughs secured the firma burgi and were collectively responsible for the rents, which were paid to the town officials, it might be supposed that a certain title to the landed property was vested in the town itself; but this was not the case. The burgesses did not hold their lands from

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86) Cunningham, Growth, 203, 205.
87) Ibid., also Cunningham, West. Civ., II, 93.
88) Luchaire, 56 ff.
89) Green, I, 172 - 3.
90) Ashley, Ec. Hist., II, 23, 24.
91) Gibbins, p. 97.

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the town, and property that escheated, escheated to the king and not to the borough.[92] Indeed it is doubtful whether the public property of the town - the walls, ditches, streets and open spaces - were the property of the burgesses collectively. They were still thought of as the king's walls, the king's streets, etc., and one who encroached upon them was held to have committed an offense against the king.[93] The idea of the town as a corporation, capable of holding property as a person, was undeveloped at the time of the rise of the towns, and developed very slowly, step by step with the development of the idea of property.[94]

This public property, held if not owned by the burgesses, was very small - little more than the walls, streets, ditches, open spaces, market places, though in some cases patriotic citizens willed their property to the town.[95] There was reason for this from the feudal point of view. From the middle of the thirteenth century there had been outcry against gifts in mortmain - that is gifts to bodies that had a perpetual existence, such as the church, manasteries,etc. These were undesirable tenants that never died, never married, never committed felony, and hence were never liable for payments of the dues and fines collected by feudal lords on such occasions. Towns were equally undesirable, hence we see the kings clinging to the title to the land which the burgess controlled.[96]

C. Common. Nor is it at all certain whether the king parted with the title to the common lands over which the burgesses had the right of use. These, unlike the public property of the town, were considerable in extent and were outside the town walls.[97] They consisted of arable land used in strips (as in the manorial system), pastures, woodlands, meadows,[98] sometimes also fisheries, salt pits and other things.[99] These could not be divided, rented, or sold, but were used in common by individual burgesses under definitely determined conditions.[100] For example, a certain tenement carried with it the right to graze so many animals on the common pasture. In rich communities as well as in poor struggling boroughs the inhabitants never relaxed their vigilance in the protection of their common property. They assembled yearly to "beat the bounds" and to see that there had been no diminishing of their rights nor alienation of their common land, and that there had been no favoritism in the allotments.[101]

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92) Pollock & Maitland, I, 636, 637, 638.
93) Ibid., I, 635, 636.
94) Ashley, Surveys, 233 (citing Maitland and Gierke).
95) Pollock & Maitland, I, 639.
96) Ibid.
97) Pollock & Maitland, I, 636; Ashley, Surveys, 173, citing Luchaire.
98) Cunningham, West. Civ.,II, 60; Green, I, 136.
99) Green, I, 138.
100) Ashley, Ec. Hist., II, 40, 41; Surveys, 232.
101) Green, Town Life, I, 137.

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IV - Land Utilization.

After all we have heard about trade being the cause of the existence of towns, it comes as a surprise when we are told that the chief use to which land was put in the medieval town was an agricultural use.

A. Common Lands. Of the common lands outside the town we would expect nothing else. These consisted of woodlands, pastures and, in the early days, of arable fields also, though this crop land had nearly everywhere disappeared before the end of the Middle Ages.[102] But common pastures long continued, in which the townspeople grazed their animals, the number of animals that could be put upon the common by each person being definitely determined and special officers appointed to see that this rate or stint, as it was called, was not exceeded.[103] These rights were no mean addition to the resource of the burgher household, and the enjoyment of them was carefully guarded against intrusion of outsiders.[104]

B. Private land.

1. Agriculture. But it was more surprising to find that the privately owned land within the walls was used chiefly for agricultural purposes. Most of the townspeople had garden plots;[105] many also had orchards;[106] they kept about their tenements - sometimes even in the house itself - the animals which were pastured on the common lands, and the effort to keep wandering pigs off the streets was a distinct failure.[107] In harvest time many of the citizens went out into the country and took part in the gathering of the crops - Coblentz stopped work on the city walls during harvest time in the thirteenth century.[108]

Even in important German cities such as Frankfurt, Nuremburg, and Augsburg, cows, pigs, sheep, fowls, and geese were kept within the city walls. Frankfurt had to forbid pig styes in front of the houses by a decree in 1481. The bankers' gild of Ulm forbade any member of it to have more than 24 pigs and cows; Nuremberg in 1475 decreed that no pigs or other stock must run loose on the streets.[109]

Inventories of wealth, taken for the purpose of assessing taxes, show the agricultural characteristics of the towns. The roll of Colchester, taken in 1295, shows a preponderance of agricultural property such as live stock and agricultural produce, although Colchester was one of the more important towns at that time.[110]

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102) Ashley, Ec. Hist., II, 40, 41.
103) Ibid., II, 40, 41; Surveys, 232.
104) Ashley, Ec. Hist., II, 41.
105) Ticknor, 61; Day, 45; Bax, German Culture, 133; Rogers, Work and Wages, 111.
106) Bax, German Culture, 133.
107) Day, 45.
108) Ibid.
109) Bax, German Culture, 133.
110) Day, 46-7.

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In 1319 one of the most respectable innkeepers of Bridport owned:

2 hogs	1 horse
2 beds	1 brass pot
2 tablecloths	1 platter
2 hand napkins	A few wooden vessels
	Some malt.[111]

In 1380 the mayor of Liverpool had property valued at £28 6s 4d - made up of

Domestic utensils
Grain in store
Wheat sown
9 oxen and cows
6 horses
18 pigs

and he was no doubt a rich man in his borough.[112] Rogers says that even London was a rus in urbe, as nearly all walled towns in England were.[113]

2. Residence. The fact that the townspeople used their land and houses for both residence and business purposes has been touched upon. We are apt to think, when we hear of a medieval town house, of some picture that we have seen showing a charming building of considerable dimensions, better built than our dwellings of to-day, and frequently far more artistic. But it must be remembered that only the best buildings survived the wear and tear of intervening centuries, and that the class of buildings of which the charming survivor was a type did not begin to be built until near the end of the Middle Ages.[114] Mrs. Green described the English town houses about 1300 as "mud or wood framed huts with gabled roof of thatch and reeds"....."lining narrow lanes and sheltering a people who, accepting a common poverty, traded in little more than the mere necessaries of life. It was not till the middle of the fourteenth century that the towns as they entered a larger industrial activity began to free themselves from the indescribable squalor and misery of the early Middle Ages."[115] The houses were built of wood, or with wooden frames filled in with mud or plaster and whitewashed, and were so flimsy in structure that they could easily be pulled down with a hook. This is exactly what was done in case of fire, to prevent the fire from spreading elsewhere. Fires were

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111) Green, Town Life, I, 15.
112) Ibid. II, 61, note.
113) Rogers, Work and Wages, 111.
114) Day, 46, 47.
115) Green, I, 13.

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frequent and disastrous, for the houses were not provided with any proper arrangements for heating or cooking - there were no chimneys.[116] The interiors were narrow, dark, drafty, good neither for work nor for residence.[117] The ordinary householder had few of the comforts of life. His dwelling had an earthen floor, no carpets, hardly any furniture. The meat was served from spits because of a lack of earthenware plates. Well-to-do burgesses lived in this fashion at the end of the thirteenth century; royal palaces were little better at the time of King John.[118] Speaking particularly of German towns, Hüllman says that only in the thirteenth century does a desire for beautiful dwellings awaken - there is no trace of it before.[119] Up to this time few fine houses could be found except in some of the more important Italian towns and perhaps in Flanders and in the free cities of the Rhine.[120] Even as late as the end of the fifteenth century an Italian writer commented on the lack of fine houses in London.[121]

Ticknor has given an account of the houses that could be found in an English town in the fourteenth century. The houses of the poorer people in back lanes were usually of one story only; sometimes a chamber was built above this, reached by an outside stair. The upper room, if such existed, projected over the lower into the street. A more prosperous artisan would have a house with a cellar; the ground floor, a foot or two above the street, was used as a shop; and living rooms for the family were either back of this or above it, while the apprentices often slept in the shop. The shop had a large window shutter that let down as a counter where goods might be displayed for sale. A wealthy merchant, such as a pepperer, a mercer, or a goldsmith, might possess a house with two stories beside the cellar. The ground floor would be occupied by the shop, with a large hall or living room behind it and often a kitchen also. A stairway at the side led to the large sleeping apartment above, a third story under the high roof might be used for storage. These better houses had often party walls of stone to a height of sixteen feet, the upper floors only being of wood.[122]

While English writers speak of the use of different floors in two story houses as separate tenements, I have found no description of double and multiple houses in English towns in these early centuries. Eberstadt, speaking of German towns mentions three distinct types of houses, (1) the separate house standing free on all sides, (2) the "half house" - though the vertical division of a larger house, (3) rows of houses

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116) Day, 46, 47.
117) Ibid.
118) Cunningham, Growth, I, 275.
119) Karl Dietrich Hüllman, Stadtwesen des Mittelalters (4 vols. Bonn, 1826-9), IV, 34.
120) Rogers, Work and Wages, 112.
121) George Gordon Coulton, Social Life in Britain from the Conquest to the Reformation (Cambridge, 1918), 334 (citing Italian Relations, p. 41).
122) Ticknor, pp. 60-63.

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under one roof.[123] The plan of lot was, as is usual today, narrow with generous depth, and the house was placed at the front, with its narrow end to the street.[124] It was often separated from its neighbor by a side set-off going down to a gutter that carried off rain and waste water. The house sometimes had windows on this side, but this was not always pleasing to the neighbors, and it is through the neighborhood feuds that were fought out in the courts that many details concerning the structure of these houses have been gleaned.[125]

From the small number of rooms that must shelter the family, the apprentices, or the servants of the merchant, and provide shop or salesroom and store rooms as well, it is evident that there must have been crowding of people in the houses even if there was not crowding of houses in the town.

3. Commerce and manufacture. As we have seen, the ground floor front room was used as a shop by merchant and artisan. Often a window shutter, when let down, formed a counter for the display of the artisan's goods, if, indeed, he did any displaying.[126] Often he worked on materials supplied to him by the person who had ordered his work, and frequently he took his tools and did the work at the home of the customer.[127]

The merchants who had goods ready to sell also displayed them in front of their homes on benches across the window spaces or in booths attached to the houses,[128] while signs telling passers by of their wares hung nine feet above the street from the over hanging upper stories, which formed a sort of pent-house over the display place below. This height for signs and for the overhanging upper stories was required in the interest of horsemen passing through the streets.[129] In the early part of the Middle Ages there were few merchants who were solely merchants - most of them practised some sort of manual calling. In the twelfth century the members of the merchant gild were craftsmen first and merchants next as far as the occupation of their time went.[130]

Some idea of the business uses to which the medieval townsmen put their houses can be seen from the list of occupations in Colchester - taken for the poll tax in 1377.

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123) Eberstadt, 47.
124) Ibid., 45; Ticknor, 61.
125) Eberstadt, 47.
126) Ticknor, 61.
127) Ashley, Surveys, 210, 226; Rogers, Work and Wages, 144; Other authorities also.
128) Day, 46, 47.
129) Ticknor, 63.
130) Cunningman Outlines, 63, 64.

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Clergymen	12	And one each of the following:
People of substance	10	Vinter
Shoemakers	16	Iron monger
Farmers	13	Brewer
Smiths	10	Glazier
Weavers	8	Sea coal dealer
Butchers	8	Old clothes dealer
Bakers	7	Fuel dealer
Fullers	6	Cooper
Girdlers	6	White leather seller
Mariners	5	Potter
Millers	4	Parchment maker
Tailors	4	Furrier
Dyers	3	Cook
Fishermen	3	Tiler
Carpenters	3	Bowyer
Spicers or grocers	3	Barber
		Mustarder
		Woolcomber
		Lorimer
		Wood turner
		Linen draper
		Wheelwright
		Glover[131]

C. Public Lands. The utilization of urban public lands in the Middle Ages presents even a greater contrast to modern conditions. Today we think of the streets as useful chiefly for transportation, for the maintenance of sufficient light and air in the building facing upon them, and for the carrying of public utilities such as water and gas mains, wires for light, telephone, telegraph, etc. These purposes the streets of a medieval town served badly or not at all. As a path for transportation the medieval street was very inadequate. It was not paved; in wet weather it became a sea of mud; even in dry weather it might be in such a condition because of the floods of waste water drained into it from the houses of dyers, tanners, wool washers and others who used water in their work.[132] Even when the street was dry it was filled with obstacles. The iron worker sometimes cast the cinders from his foundry, smoking hot, upon the street;[133] lumber dealers blocked it with trees; grain dealers winnowed their grain by throwing it from an upper window into the street to get rid of the chaff which drifted off in clouds. The housekeeper had no more respect for the proper use of the street than had her artisan husband, all the waste from the kitchen was thrown into the street where it remained to decay unless it was eaten by the pigs and dogs that wandered over the streets, constituting the sole method of garbage disposal known in the Middle Ages. Indeed so necessary was the work of these scavengers that when towns in a spirit of civic zeal decreed that these animals must

131) Rogers, Work and Wages, 121.
132) Green, Town Life, II, 30, 31.
133) Ibid.

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be kept off the streets, the dangers of pestilence due to the presence of decaying matter were increased.[134]

I have found no more vivid picture of the condition of the streets in the Middle Ages than that given by Mrs. J.R. Green in her Town Life: She says: "Streets were choked with the refuse of the stable, made impassible by the 'skaldynge de hogges', flooded by the overflow of a house, drowned by the turning of a watercourse out of its way or the putting up of a dam by some private citizen heedless of ill consequences to the public road. Lumber dealers cast trunks of trees right across the street, dyers poured their waste waters over it till it became a mere swamp, builders blocked it up utterly with the framework of their new houses, and traders made their wharves upon it. Not only the most thriving and respectable merchants, such as the Honywodes, but the butcher and swine keeper as well, threw the waste of house and shambles and swine-cote into the open street till there was scarcely any passage left for the wayfarer; or established a 'hoggestok', 'which smells very badly and is abominable to all men coming to market, as well as to all dwelling in the town.'"[135]

Even a university town like Cambridge showed no better conditions, as the record from Cooper's Annals of Cambridge shows a royal writ required the Chancellor of the University of Cambridge "to remove from the streets and lanes of the town all swine, and all dirt, dung, filth and branches of trees; and to cause the streets and lanes to be kept clean for the future."[136]

The merchants as well as the artisans made use of the streets for their own purposes. Besides disposing of waste upon it, they encroached upon the street by displaying their wares upon it in front of their houses, even, in the later Middle Ages, building booths for these wares out into the streets,[137] thus narrowing further a sufficiently narrow way.

The narrowness of the streets prevented the performance of that service that we expect of them - the maintenance of an adequate supply of light and air. The limited amount of light and air that might have been provided was shut off further by the overhanging upper stories that in some cases, where there were many stories, extended so far over the street that inhabitants of houses on opposite sides of the street could easily reach across the little space that was left between them.[138]

Streets then, poor as suppliers of the facilities we expect streets to supply were utilized for purposes of manufacture, of

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134) Green, Town Life, II, 30, 31.
135) Ibid, II, 29.
136) Coulton, Social Life, 330, from Cooper Annals of Cambridge, I, 134.
137) Eberstadt, 42.
138) Rogers, Work and Wages, 111. (Also other authors).

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of trade, even for residence if we interpret the encroachment on street space by the upper stories of dwellings as utilization of street area.

The streets were also used for another purpose that seems strange to us. They were used for the dissemination of news - they took the place, to a certain extent, of newspapers and postoffices. The meetings at the town hall and the meetings of the court were cried in the streets; court cases were announced by the town crier, and the probation of wills; ordinances and royal proclamations were called on the streets. Advertising of plays, minstrels, etc. was done by crying through the streets.[139]

V. Public Services and Public Utilities.

The condition of the streets and the uses to which they were put were largely due to a lack of what we know as public services and public utilities. Some of these things began to be supplied as the Middle Ages advanced.

A. Street Paving. The paving of streets, for example, begins toward the end of the twelfth century. Paris was the first of the great cities to pave its streets in 1184[140] or 1185.[141] Even the Italian cities did the work of street paving only in the thirteenth century as is evident from dates given by Hüllman - Florence, 1236; Bologna 1241; Modena, 1262; Padua, 1265.[142] In Germany, Augsburg paved its streets in 1415, after a citizen had made a beginning before his own house, Regensburg in 1403, and Nuremberg a little earlier.[143] London was the last of the great cities to pave its streets, in 1417; and other English towns followed its example in the fifteenth century.[144] Even when the paving was done, it was not always by the town. The act of Parliament for the paving of Southampton, for example, required each citizen to pave before his own door as far as the middle of the street,[145] and the citizens were quite generally required to work upon the streets as well as the harbors or dykes, if the town happened to have them.[146]

B. Street Cleaning Sewerage. As we have seen, street cleaning service was practically unknown. Garbage that cluttered the streets might be eaten by the dogs and pigs. Waste water flowed into the gutters which might be in the middle of the street with the sides sloping toward it. The absence of paving allowed much of the water to soak through. Only a heavy rain gave anything like a general cleaning and in dry seasons conditions became

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139) Green, Town Life, I, 161-2.
140) Eberstadt, 56.
141) Hüllman, IV, 37-38.
142) Ibid.
143) Ibid.
144) Green, Town Life, I, 18 (note); Hüllman, IV, 37.
145) Green, I, 18, note.
146) Ibid., I, 141-3.

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very bad.[147] Occasional efforts at cleaning up were made - for example, the order of the chancellor of the University of Cambridge already cited, and a law of Richard II of England passed in 1388 ordering town officers throughout his kingdom to clean their towns of all that could corrupt and infect the air and bring disease.[148] Toward the end of the period there is a beginning of sewer construction - often at first as a private undertaking. Such was the construction of a sewer at Canterbury in 1486 by William Pratt at his own expense.[149]

C. Water Supply. The water supply for domestic purposes was secured chiefly from the wells that stood in the gardens behind the houses. For industrial purposes a larger supply was needed, which was obtained from some stream - often by diverting part of it through damming. This, when done by the artisans themselves, had sometimes disastrous effects. The cities sometimes undertook such work, especially those that had traditions of like service in the old Roman days. Hüllman names some such towns that established water service: Milan, 1179; Siena, 1193; Cremona, 1235; Como, 1257; Modena, 1259; Parma, 1283-85; London, 1236; Colmar, 1292.[150]

D. Street Lighting. Street lighting as a public service did not exist - it came in mostly in the sixteenth century after the end of the Middle Ages, though London had done something in this direction in the fifteenth century.[151] Citizens who ventured into the streets had to provide their own lighting by carrying lanterns, and it is unlikely that they would often venture at night into the streets that have been described. Beside the accidents that might occur through the condition of the streets, they might also expect the attacks of marauders, who could easily perpetrate their crimes in the darkness that prevailed. The Christmas custom of burning candles in our windows until they are entirely consumed, to which we rather sentimentally cling, appears to have a far from sentimental origin. A London ordinance of 1405 orders an extra watch put on for Christmas, which was to allow no "people with visors or false faces" to go about, and it further orders "that on the outside of every house that is upon the high streets and lanes of the said city, every night during the solemn Feast aforesaid, a lantern shall be hung, with a lighted candle therein, the same to burn so long as it may last." 152)

E. Police Protection. Police protection, such as it was, was provided by the town watch, made up of citizens who took their turns at this service.[153] This was probably not a loved duty, for Luchaire mentions a watch and a counter watch - those serving in the latter were to see that the former did their duty.[154]

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147) Ticknor, 60.
148) 12 Richard II, cap. 13.
149) Green, I, 19, 20.
150) Hüllman, IV, 39.
151) Hüllman, IV, 15.
152) Coulton, 332.
153) Green, I, 132 - 3; Luchaire, 182 - 3.
154) Luchaire, 182-3.

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The efforts of the members of the watch in the dark streets were not very effectual, especially when the offenders were on horse - a number of French, German and Italian towns used the device of stretching chains across their streets at night to prevent the passage of riotous horsemen.[155]

F. Fire Protection. Protection from fire was largely in the effort for fire prevention. The curfew required the covering of fires at eight or nine o'clock.[156] The town authorities urged the substitution of stone for wood,[157] and in the fifteenth century we find orders for the substitution of tiles for thatch as roofing.[158] When a fire actually broke out the chief method of dealing with it was to tear down the burning building, and the alderman's hook was an instrument intended for this purpose.[159] Disastrous fires were very frequent.

G. Other Services. While the public services which we expect were performed so badly or not at all, other services were given. The town ran its own mill,[160] it often ran public ovens, brewhouses, and bakehouses,[161] it sometimes undertook the purchase of the supply of grain for the whole town.[162] Entertainment was also provided at town expense by waits, minstrels, showers of animals, and there were public games, feasts and pageants.[163]

VI. Regulation of Use of Land.

A. Public Land. That some regulation of the use of land developed we have seen through incidental references. These may be considered under two headings: regulation of the use of public land and regulation of the use of private land. We have noted cases of prohibition of the use of the streets for the disposal of refuse. Such regulations are met with more frequently as time advances. Hüllman, who has studied the ordinances of German, French and Italian cities, has found orders for clearing the streets of structures that were built in front of houses, for cleaning of drains; orders prohibiting the running of pigs on the streets, the casting of refuse into the streets, the throwing of dirty water from windows. Butcher and fish dealers must not soil the streets with their wares, leather workers, fullers, and dyers must not work on the street and must not let the water from their shops out until evening; flax and hemp must not be broken on the streets.[164]

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155) Hüllman, IV, 15 (Marseilles, Aachen, Siena, Parma, Regensburg).
156) Ticknor, 59.
157) Ibid., 64.
158) Coulton, 318.
159) Green, I, 193-4; Ticknor, 64.
160) Ashley, Ec. Hist. II, 32, 33; Cunningham, Outlines, 55-6.
161) Ashley, Ec. Hist., II, 40, 41.
162) Gibbins, Ind. in Eng., 97; Ashley, Ec. Hist. II, 33.
163) Green, I, 145.
164) Hüllman, IV, 40, 41, 42.

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B. Private Land. The use of private property is also regulated to some extent. Leather, wool, cloth and hides must not be washed within the city limits, but at appointed places outside the walls in certain continental cities.[165] English butchers were prohibited from doing the actual slaughtering of animals within the walls of a town in 1487.[166] Dung pits must be of a certain depth,[167] pig styes must not be built in front of the houses.[168]

Citizens were required to observe certain regulations for fire prevention.[169] An evidence of this regulation in London in 1302 is found in the record of the agreement of Thomas Bat with the city:

"1302 Thomas Bat came before John le Blund, Mayor of London, and the Alderman, and bound himself, and all his rents, lands, and tenements, to keep the City of London indemnified from peril of fire and other losses which might arise from his houses covered with thatch, in the Parish of St. Laurence Candelwykstrete; and he agreed that he would have the said houses covered with tiles about the Feast of Pentecost then next ensuing. And in case he should not do the same, he granted that the Mayor, Sheriff, and bailiffs, of London, should cause the said houses to be roofed with tiles out of the issues of his rents aforesaid."[170]

London had a building act as early as 1189 containing some stringent provisions as to what kind of houses men might erect.[171] Eberstadt believes that there was in German cities much more regulation of building than appears in the public records, because of the fact that building was a matter of gild regulation and the regulations of the gilds were not written down until the fifteenth century.[172] He has found ordinances in Cologne and Sachsenspiegel limiting the height of houses;[173] there were regulations against leaving lots made vacant by fires, without buildings - the owner had either to build or to sell.[174] This provision was not as harsh as it seems because of the ease of housebuilding due to the presence of material for it in the town common forests.[175] He finds that in the fourteenth century an expropriation law was developed and used especially for extending the walls and ditches in the frequent

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165) Hüllman, IV, 40-42.
166) Green, Town Life, II, 32.
167) Hüllman, IV, 40, 41.
168) Bax, 133.
169) Hüllman, IV, 33; Coulton, 318, quoting Riley, Memorials of London and London Life, 46.
170) Coulton, Social Life, 318, from H.T. Riley's Memorials of London and London Life, 46.
171) Pollock & Maitland, I, 644.
172) Eberstadt, 56.
173) Ibid.
174) Ibid., 54.
175) Ibid., 55.

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expansions of the towns, as well as for street building and for the expansion of the cities.[176] He says that the Middle Ages recognized the whole of city building as a problem of settlement and that everything is subordinated to this great purpose; regulation of everything - from trade in land to city expansion- must adapt itself to this.[177]

VII. Taxation, Land Value and the Real Estate Business.

A. Taxation. We have seen that public services were few, that of those there were, many were provided by the citizens working together; hence the need for taxes for town purposes was small.[178] The power of taxation was not expressly granted in the charters of English towns before the time of Edward I. If they wished to repair their walls, bridges or streets, they had to apply to the king for a grant of murage, pontage or pavage.[179] This process recognized the right of the king to tax his boroughs; and to this right he continued to cling. Pollock and Maitland say of the English towns, that the burgher's duty of paying "scot and lot" with his fellows came home to him chiefly, if not solely, as a duty of contributing toward sums exacted from the borough by an outside power.[180]

Since the burgesses were collectively responsible for taxes, any revenues they had might be applied to the payment of the tax. The town had regular revenues from the tolls it imposed on outsiders (which were no inconsiderable resource),[181] from the profits of the courts (an important financial asset in the Middle Ages), and from the burgage rents. If these sources could not pay what was exacted, a tax levy might be made, but this was usually levied on the burgesses in proportion to their goods and chattels, and was not a land tax.[182] Taxes were sometimes assessed on the various mercantile or industrial companies according to their standing. However, a house tax was also levied at times - not as a percentage of the value of the house, but as a hearth tax or chimney tax.[183] Early in the fifteenth century special taxes were imposed occasionally on land owners and holders of rent charges, which were to develop later into forms of an income tax.[184]

It must be remembered, however, that these taxes were not the regular taxes with which we are familiar, but were imposed at irregular intervals. The income from the royal domain and the

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176) Eberstadt, 55.
177) Ibid., 58.
178) Pollock & Maitland, I, 647-8.
179) Ibid., 646.
180) Ibid., 647-8.
181) Ibid., 648.
182) Pollock & Maitland, I, 663-4; Palgrave, Dictionary of Political Economy, "Taxation."
183) Cunningham, West. Civ., II, 93; Palgrave, Dictionary, "Taxation."
184) Palgrave, Dictionary, "Taxation."

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feudal revenues covered most of the needs of the state, and taxation was resorted to only occasionally.

An interesting circumstance was, that if the town fell in arrears in its payments of rents or taxes, the king could proceed against all the burgesses or against any burgess for the amounts due. The principle would seem to be that the borough was responsible for its members and that any member was responsible for the whole borough - a principle similar to that used in medieval trade retaliations.[185]

The finances of the French communes seem to have been less well administered than those of the English towns. They derived their revenues from public property (very little), the proceeds of the courts, some indirect taxes, and some direct taxes imposed at irregular intervals. Their receipts were not always equal to their expenditures, and they resulted to the disastrous expedient of contracting loans which frequently reduced them to a bankruptcy. This bankrupt condition was one of the factors contributing to the fall of French towns from their free condition, which lasted only from 1130 to 1330,[186] the other important factor being the strength of the rising French monarchy. Luchaire says, in justice to the towns, that the expenses which ruined them were the payments exacted from without; but he also says that the towns, like other medieval groups, ignored or misunderstood economic laws.[187]

Luchaire also gives figures for the value of the collective rents paid by different French towns in the thirteenth century, which, if we had figures showing the nature and extent of the property, might give us some idea of its value.[188] It would probably be a fruitless task, however, to estimate in any money standard the value of real property in the Middle Ages, because of the difference between the purchasing power of money then and now, as well as variation in its purchasing power during that period.

B. Land Values. When it is remembered that the ground rent of the original owners was fixed and unchangeable it will be seen that any increase in the value of real property would fall to the buildings.[189] The value of any building, compared with others, would depend on its own qualities - whether it was new or old, large or small, etc., and also on the rent of the ground on which it stood. If the rent of this was high, the value of the house was less in proportion; if the ground rent was low, the value of the building was high.[190] Arnold examined hundreds of deeds,

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185) Pollock & Maitland, 663-4.
186) Green, I, 29; Luchaire, 288 ff.
187) Luchaire, 204, 205.
188) Ibid., 197.
189) Eberstadt, 46, 47.
190) Arnold, 209.

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transfers, etc. in German cities and found wide variation in the ratio between the value of the buildings and the figure of the ground rent. He found cases where the value of the building was not twice the figure of the ground rent, other cases in which it was a thousand times as much.[191]

Concerning the value of real property as an investment little information has been brought to light. Eberstadt speaks of people who regularly let houses to others as early as the thirteenth century,[192] and if this was done, there must have been a profit in it. In England the letting of houses was probably not so profitable, for from the earliest times the land owner in the country or house owner in the city made all permanent improvements and did all repairs.[193] Rogers cites the case of town property owned by New College that should have given a revenue of 45 £ 9s 6d in 1453, but which, because of repairs and other expenses, returned to the College only 3 £ 6s. He says that the possession of house property during the fifteenth century and for more than two and a half centuries thereafter was not the source of profit that it has since become.

C. Real Estate Business. In German cities there were people regularly engaged in the business of buying and selling real estate, and there was some speculation in land when it was changed over from agricultural to urban use, for it was clearly recognized that there was an increment in value and this was regularly counted upon, though after the land passed into urban use no further increment could be secured, due to the system of fixed ground rents and separation of property in land from property in buildings.[194]

Conclusion.

Transition. It would be interesting, if time permitted, to trace these points through the period of transition, through the great changes that took place in the sixteenth century, when the medieval towns, having had their day, either were transformed to meet new conditions or fell into unimportant positions in the ranks of cities. The walls and fortifications were no longer useful in an age of gunpowder and cannon, the gilds with their narrow regulations were out of date in a commercial world that stretched across the Atlantic, in which nations instead of cities contended for supremacy. Some of the old towns adapted themselves to new conditions and maintained their importance, but the story of urban life in the sixteenth century is that of the growth of new industrial centers in the suburbs or on manorial estates rather than of any increased prosperity in the towns organized according to the old model.[195] The great day of the medieval town was over - it must become a new town with a new organization or sink into insignificance.

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191) Arnold, 209.
192) Eberstadt, 46.
193) J.E. Thowld Rogers, Economic Interpretation of History (New York, 1888), 168.
194) Eberstadt, 46.
195) Cunningham, Outlines, 68; Gibbins, Ind. In Eng. 146-148.

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INSTITUTE FOR RESEARCH IN LAND ECONOMICS

URBAN LAND ECONOMICS

Land Values

by

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Institute for Research in
Land Economics

"UNDER ALL, THE LAND"

"My own conviction has long been that the land question far transcends any restricted field of economics and that it is fundamental to national survival and national welfare. It is truly a problem calling for statesmanship of the broadest type." - Professor Frank A. Fetter.

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LECTURE I.

The Growth of Land Values.

In this first lecture I want to impress upon you the completeness with which the conditions of urban life broke with the past as a result of the Industrial Revolution of the last half of the Eighteenth Century. One hundred years is a very brief period in the history of the world, but in the Nineteenth Century the type of city which had developed gradually through ten thousand years suddenly disappeared, leaving only a few picturesque survivals in the backwaters of civilization. The city of 1750 was not strikingly different from the city of the Roman Empire, but the city dweller of 1750 would be as completely lost and bewildered in the city of 1922 as if he had been suddenly transported to another planet in which the course of social evolution had been different from the beginning.

You are familiar with the descriptions of the old type of city with its narrow crooked streets, its picturesque buildings, its inconveniences and indescribable filth. Perhaps the only large city in Europe which still retains its essential medieval conditions is Constantinople, which even now with its dog scavengers and its degenerate population is perhaps cleaner than it was in the reign of Justinian. In some of the less progressive cities of Spanish America medieval conditions also survive and even in our own south there are many out of the way villages in which there are no attempts at sanitation and in which pigs run at large on the streets and can be heard grunting under the floors of the schoolhouse, while classes are being heard in the room above. It is hard to realize that these conditions were familiar to our own great-grandparents wherever they may have lived. Prints less than a hundred years old show pigs running at large on Broadway in New York. In 1840 there was no city water supply in New York and special assessments were levied for wells and pumps at street corners. Garbage was collected in dog carts and hauled up Fifth Avenue to what is now Central Park where it was fed to thousands of pigs and chickens kept by a nondescript tribe of squatters who lived in shacks on land which large real estate owners were holding for future development.

The old city was a trading center or a center of governmental activities. It grew slowly and was never large in our modern sense. We know very little about the population of ancient cities, but it is safe to say that most of the population estimates are far too large. There is on record a poll tax enumeration which shows that London in 1377 had a population of about 35,000. In the same year York, the second city in England, had about 11,000 inhabitants.[1] There were undoubtedly some larger

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1) A.F. Weber - The Growth of Cities in the Nineteenth Century.

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cities in southern Europe and Asia of which we have no satisfactory population estimates.

Then to this slow moving and bad smelling world came a series of great inventions and discoveries. Old handicraft methods suddenly became obsolete, factories were built, and the people crowded to the cities as factory operatives. A new type of city developed, and the old cities were transformed. Rapid communication was developed and improved methods of agriculture made it possible to feed a vastly larger population with no additional labor on the land. After the Napoleonic period, Europe was free from long devastating wars for a hundred years. Discoveries in sanitation decreased the dangers of pestilence and lowered the death rate, so that the population suddenly began to increase more rapidly than ever before. This increased population was not needed on the land, so it was absorbed by the industrial cities and overflowed from Europe to populate the New World.

In the United States the rapid growth of cities has been particularly striking. Cities like Chicago, Detroit, Cleveland and Los Angeles have grown up from straggling villages within the lifetime of men still living. In 1790 only 3.14 per cent of the American population lived in cities. In 1920 over 50 per cent were city dwellers. In 1800 there were only six cities in the United States, Philadelphia with 69,000, New York with 60,000, Baltimore with 26,000, Boston with 25,000, Charleston with 20,000, and Salem with 9,000. Now there are 67 cities in the United States with a population of over 100,000. But this phenomenon has not been confined to the United States. Previous to the nineteenth century there was probably never a city in the world with a population of a million. London first reached the million point in 1811, and Paris not until 1846. In 1800 London, Paris, Vienna, Moscow, St. Petersburg and Constantinople were perhaps the only European cities which had more than 200,000 population. Calcutta and Madras in India were estimated at 800,000 each. No satisfactory estimates can be made of Chinese and Japanese cities, but it is quite certain that none had a million inhabitants. The largest city in the Western Hemisphere was Rio de Janeiro with 125,000.

This concentration in cities has been accompanied by a vast increase in social wealth. There was a greater surplus than ever before. Wealth accumulated with unprecedented rapidity, even more rapidly than population. This new wealth was not equitably distributed, but the old idea of the rich growing richer and the poor poorer is true only in a relative sense. The poor in every country, at least before 1914, were better off than ever before in the history of the world. The minimum standard of living has risen tremendously. Even the most poverty stricken family rightly insists upon a standard of living far above that of the middle class city dweller of the past ages. This increased standard of living and comfort, much of it enjoyed by all, simply because they live in a city which requires these standards and provides means for

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maintaining them, is really an increase in the wealth of the individual family. On the other hand, the rich have certainly grown richer. In every small town now there are well-to-do men who would have been considered fabulously rich a century ago. As recently as 1855 the New York Sun published in pamphlet form a list of "The Wealthiest Citizens of the City of New York," containing "the names of the most prominent Capitalists whose wealth is estimated at one hundred thousand dollars and upwards." According to the list W.B. Astor was the wealthiest man in New York with $6,000,000. W.H. Aspinwall, James Lennox, A.T. Stewart and Stephen Whitney were the only others having $2,000,000 or more. The whole list contained about 1000 names. In 1920 more than 6,000 persons in New York State, of whom more than half were from New York City, admitted in their income tax returns incomes in excess of $50,000.[1]

It is this growth in population and the increase in the social wealth that is responsible for the growth of land values in modern times. There is more competition for a given piece of desirable land and more men have the price to pay for it. The differential between good land and poor, between a desirable site and an undesirable one is enormously greater. A few weeks ago I saw a paper published by a single tax organization in which a certain statistician "after years of investigation" presented figures showing that the reason the working people and the farmers had not enjoyed the full benefit of the vast savings in labor effected by the age of machinery, was that these savings had been absorbed by the land monopoly. He showed a chart in which the land values were pictured mountain high as compared with values a hundred years ago. His figures were more or less accurate, but they told only a part of the story. The whole story is that all forms of wealth have piled mountain high and that land has shared in the general advance.

In all the cities west of the Alleghenies it is obvious that practically all the land values which now exist have been created since the year 1800, for in that year there were in all the Mississippi Valley only a few trading posts. On the Pacific Coast there were only a few Spanish settlements. In the Atlantic Coast cities, however, modern city development was already starting in 1800, and in that year the assessors valued all real estate in the city, then only the Island of Manhattan, at $18,696,270. We have no means of knowing what percentage of the true value this represents, or how much was land value apart from improvements. But it is fairly safe to assume that the true value was somewhere between $30,000,000 and $60,000,000. Of this value at least half was undoubtedly in the land, making the land value of Manhattan Island in 1800 somewhere between $15,000,000 and $40,000,000. We will assume that the value was $25,000,000. In 1850 the assessed valuation of the real estate on Manhattan Island was $207,000,000.

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1) World Almanac, 1921 - p. 423.

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In the five year period 1850-54 a comparison of sales with assessed valuations shows that improved real estate was valued for taxation at about 67 per cent of its selling price and that vacant land was valued at about 43 per cent. This would indicate real estate value of at least $400,000,000, of which perhaps $250,000,000 was land value. In 1906 the value of land alone was $2,600,000,000 and a comparison of assessed valuations with sales showed a ratio of 76, making the total land value $3,400,000,000. No other equal area of land (24.8 square miles) can show absolute increases in value to compare with this. Yet if we consult a compound interest table we find that if Father Knickerbocker had taken $25,000,000 in 1800 and invested it at 5 per cent and each year reinvested his interest at the same rate he would have had $3,400,000,000 as early as 1901. In other words, New York City land maintained an average rate of increase of slightly less than five per cent for over 100 years. King's County (Brooklyn), which now has a population as great as that of Manhattan, had a population of only 5,740 in 1800 as compared with New York's 60,565, and its total assessed valuation was only $1,800,000. By 1906 the land alone was worth $650,000,000. This is equivalent to about 5 1/2 per cent compound interest. The increase in land values in the outlying boroughs of Queens and Richmond was equivalent to about 4 1/2 per cent compound interest.

The gross rate of increase in Western cities has been even greater because of the negligible land value at the beginning of the nineteenth century. There are undoubtedly cities in which not only the gross but even the net increase in value for many years was in excess of 5 per cent. But when the full story is told a hundred years from now it is not certain that any one of them will show more constant increases than Manhattan from 1800 to 1906.

It is very difficult to obtain satisfactory data on the growth of land values in any city. In only a few cities is the value of the land separated from that of the buildings in tax valuation, and the ratio of assessed valuation to the real value varies all the way from 25 per cent to 100 per cent. In Boston land has been separately valued for many years. The increase in value has been steady, but in thirty years it has hardly more than doubled. In Milwaukee assessed land values increased from $74,000,000 in 1895 to $100,000,000 in 1910. In Seattle assessed land values increased from $70,000,000 in 1905 to $205,000,000 in 1910. This was a typical boom period in which speculation in land went beyond the bounds of reason and perhaps anticipated legitimate increases in value for years to come. Los Angeles has passed through two such land booms. In the first, about the year 1889, lots subdivided out of ranches miles away from the center of the city sold for prices absurdly high. The boom collapsed suddenly with ruinous effects and the city passed through several years of depression in land values. In 1900 and 1901 lots were still selling below the prices of 1889 although the city had grown rapidly. A few years later there was another

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boom, this time on a firmer basis of actual value, but again prices went beyond reason. It would be a very interesting study to trace these growing pains of this wonderful city which in forty years has transformed itself from a squalid Mexican town to a rival in population and wealth of Boston, Baltimore, and St. Louis. Other examples of boom cities are Omaha, Nebraska and St. Joseph, Missouri, which were so anxious in 1900 to increase prices of real estate that the census enumerators counted the graves in the cemeteries in order to pad the population. The people in these cities were far less enthusiastic in 1910 when an honest enumeration showed no increase over the padded lists of ten years before.

In this connection it is interesting to note some observations of Michel Chevalier, a distinguished French economist, who visited the United States in 1835:[1] "The unparalleled growth of some new towns has turned the heads of the nation, and there is a general rush upon all points advantageously situated; as if before ten years three or four Londons, as many Parises, and a dozen Liverpools, were about to display their streets and edifices, their quays crowded with warehouses, and their harbors bristling with masts, in the American wilderness. In New York building lots have been sold sufficient for a population of two million souls and at New Orleans for at least a million. Pestilential marshes and naked precipices of rock have been bought and sold for this purpose. In Louisiana, the quagmires, the bottomless haunts of the alligators, the lakes and cypress swamps, with ten feet of water and slime, and in the North, the bed of the Hudson with 20, 30, or 50 feet of water, have found purchasers.

"Take a map of the United States; place yourself on the shore of Lake Erie, which twenty years ago was a solitary wilderness, ascend it to its head; pass thence to Lake St. Clair and from that Lake push on to the north, across Lake Huron, go forward still, thread your way through Lake Michigan, and advance southward until the water fails you; here you will find a little town by the name of Chicago, one of the outposts of our indefatigable countrymen when they had possession of America. Chicago seems destined, at some future period, to enjoy an extensive trade, it will occupy the head of a canal, which is to connect the Mississippi with the lake and the St. Lawrence; but at present it hardly numbers two or three thousand inhabitants. Chicago has in its rear a country of amazing fertility; but this country is as yet an uncultivated wild. Nevertheless the land for ten leagues round has been sold, resold, and sold again in small sections, not, however, at Chicago, but at New York, which by the route actually travelled is 2,000 miles distant. There you may find plans of Chicago lots numerous enough for 300,000 inhabitants; that is more than any city in the New World at present contains. More than one buyer, probably, will esteem himself fortunate if on examination he shall find not more than six feet of water on his purchase."

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1) Society, Manners and Politics in the U.S., p. 305 et seq. Speculations, 1835.

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Another interesting development of the past quarter century has been the new industrial city, built by a great corporation about a single industry. Perhaps the first was Pullman, with its industrial feudalism which Professor Ely was the first to present in its true light thirty-five years ago. With all good intentions Mr. Pullman tried to build and maintain a model town in which everybody would be good and happy, but in which only the company officials would be entrusted with any governmental responsibility. The wreck of this plan in the great Pullman strike is another story.

More interesting from our point of view is Gary. The story of the growth of values in land in Gary has been told by Professor Haig.[1] As you know, Gary was a city by decree of the United States Steel Corporation. In 1906 the corporation bought 9,000 acres of marshland and sand dunes running seven miles along the southern end of Lake Michigan. This land was unsuited for agriculture and practically uninhabited, but as its potential industrial value had already been recognized by others, the corporation was obliged to pay $7,200,000 for the tract, or an average price of about $800 per acre. Old inhabitants said that at about the time of the Civil War this land sold for $1.00 an acre and in 1890 it was worth from $50 to $150 an acre. This tract was held and developed by the Gary Land Company, a Steel subsidiary. The remaining 9,749 acres of the present city of Gary was never under company ownership. It was worth from $50 to $75 an acre in 1906, making the total land value of the city in 1906 about $8,000,000, or, eliminating the land on which the plant was built, about $6,500,000. Professor Haig estimates that in 1915 this non-plant land was worth $33,500,000, an increase of $27,000,000. The total land tax paid in nine years was about $2,000,000. Street improvements cost $5,000,000 less $1,000,000 in delinquent assessments covered by bonds. The total carrying charge on the land without interest in nine years was, therefore, about $6,000,000, leaving a net increment of $21,000,000.

Another study of city land values, although in a city of an entirely different type, was that of Dr. Mewes, of Freiburg, in Germany, in 1904.[2] The study covers forty years from 1863 to 1902, during which time the city increased in population from 19,000 to 61,500. Freiburg is not only a University town, but an industrial city as well. It is located in Baden at the edge of the Black Forest. The residential section extends up through three Black Forest Valleys, the Höllenthal, the Bohrerthal and the Hexenthal. In these valleys the city has always enforced severe building restrictions which have confined the expanding business interests to already congested inner sections of the city. These restrictions have kept land values down in the upper class residence sections and increased values in the lower class residence

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1) Political Science Quarterly, 1917, vol. 32, p. 80.
2) Volkswirtschaftliche Abhandlungen der Badischen Hochschulen, 1905.

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sections in the inner city. In 1898-1902 the average price of the upper class residence land was 24.5 marks per square meter, for middle class residence land 40 marks and for lower class residence land 59 marks. On the main business street the mean land value in 1864-68 was 92.5 marks per square meter, in 1882-92, 207.5 marks, in 1893-97 299 marks, and in 1898-1902, 500 marks. Dr. Mewes analysis is made in great detail and with traditional German thoroughness, but unfortunately he does not tell us about the taxes and other carrying charges which would offset much of the value increment over the forty years covered by his study.

The distribution of land values within a city is usually very uneven. One would naturally expect values to be greatest in the business center of the city and gradually diminish until the site value merged with the agricultural value in the surrounding country. But unless a city is built on an open prairie, geographical considerations will modify the values of land. The courses of rivers and streams and the contour of the land almost always modify the direction of city expansion. High land is more desirable for residence, water fronts for warehouses and elevators, valleys and lowlands for factories, lumber and stock yards. A more or less accidental location of a particular industry or group of industries may change the direction of city growth and modify land values. The Chicago stockyards is a good example. The location of railways and transit lines affect profoundly the development of land values. Social considerations are tremendously important in determining land values. Much as we may deplore race discrimination it is an inescapable fact that a few colored families moving into a good residence neighborhood will immediately cut land values in half. The location of parks will change the whole course of land values. The most rapid value increases on record in New York City followed the laying out of Central Park. Building restrictions and zoning ordinances often modify values to a very great extent as we have already seen in the study of Freiburg.

It is these numerous elements of uncertainty which make land speculation so dangerous. Large areas in New York City are worth much less now than they were twenty years ago for reasons which could not be anticipated by the owners.

Not only is the growth of land values uneven but in point of time the rate of growth is subject to wide variations. Periods of rapid increase in land values are followed by periods of depression or stagnation during which general values are stationary or even falling.

Land values tend to follow the business cycle, but with some interesting variations. Recently I have been working on an index number of land values for the Borough of Manhattan, based on a comparison of sales with assessed valuations. This index is now practically complete for the past seventeen years. Taking 1913 as

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the base year, the values, subject to a few minor corrections, are as follows:

1904	102	1913	100
1905	108	1914	97
1906	105	1915	98
1907	109	1916	96
1908	104	1917	89
1909	104	1918	88
1910	110	1919	95
1911	103	1920	111
1912	101	1921	112

The increase of values in 1905 followed the opening of the original subway, which opened large areas of Manhattan as residence districts. The drop in 1908 was evidently the result of the stock market panic of the fall of 1907, which forced many sales of real estate in the process of liquidation. With renewed prosperity, values again rose; in 1911, however, the real estate was assessed at practically full value for the first time. This of course resulted in a material increase in the tax rate on full value and a corresponding fall in prices. During the war new building practically stopped in New York as elsewhere on account of labor shortage and the high prices of building material. As a result the values of building rose while the land values remained low. But by 1920 rents were forced to a new high level, making it again profitable to build, and we find an immediate increase in land values to the highest point in the city's history. This general increase, which followed two years after the boom in general prices, was checked in 1921, but there has been no fall in values because rents are still high and there is still a shortage of housing.

Less satisfactory evidence for earlier years based largely on the assessed valuation, checked by sales in a few years, indicates a land boom in the thirties followed by a depression after the panic of 1837. A similar land boom followed the Civil War and was brought to an end by the panic of 1873, which cut speculative land values on Fifth Avenue in half.

The determination of the true value of land in studies of this sort is extremely difficult. Assessed valuations in the past have frequently been no better than wild guesses on the part of the assessor, checked in some cases when they were unusually high by court proceedings on the part of the land owner. In New York the land owners who had influence with the district leader were said to have been able to keep their assessed valuation down. In recent years, due largely to the excellent work of Mr. Lawson Purdy as President of the Tax Commission from 1906 to 1917, assessed valuations in New York have been a fairly good guide to the true values. Other cities are also improving their methods of assessment, so that eventually it may not be necessary to go behind the assessor's reports in any well administered city. As a result of this lack of accurate data in regard to the growth of land values,

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there is much popular misconception as to the rate of growth, and particularly as to the true investment value of land.

We have pointed out in this lecture the changed conditions of urban life which have resulted in vast increases in population and consequent increases in the value of urban land. We have seen that the value of land is influenced by a complexity of causes and that it fluctuates from year to year. In the following lectures we will take up the costs of land ownership under certain conditions, and show how these costs, often to a very large extent, offset even the greatest gross increments in the value of urban land.

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LECTURE II

Land Values in New York City.

In this and the following lectures I shall be obliged to rely almost entirely on New York sources. It might be better if I could discuss contemporary land values in some other American city in which conditions would be more typical. But unfortunately we have not been able as yet to extend our studies to other cities, and there is very little material available from other sources. However, New York has a universal interest as our largest city, and it is also of interest as the city in which land values are highest. And while New York is not entirely typical, I am sure that many of the conclusions which have been drawn from the study of New York land values would be found to hold equally well for Chicago, Milwaukee, Los Angeles or any other modern city.

Since I shall be obliged to talk so much about New York it may be well at first to get the geographical background well in mind. As everyone knows, New York was originally confined to the lower end of Manhattan Island. The site was chosen not only because of the incomparable harbor, but because of its natural defenses. Protected on three sides by water, the old Dutch settlers felt entirely secure behind the stone wall which they built across the island at the present location of Wall Street. By 1800 the city had expanded north beyond the canal which the colonists constructed across the island where Canal Street now is. In 1807 it had become apparent to citizens of New York that the city would eventually cover the whole of Manhattan Island, even including the town of Harlem, some seven miles to the north. So a city planning commission was appointed, which after long deliberation reported in 1811. The plan as reported and adopted was in many respects a great mistake. The commissioners thought that the burden of traffic would be from river to river across the island, so 225 new streets were planned from east to west--nineteen to the mile, while north and south there were only twelve main avenues, six to the mile, with Broadway as the only diagonal street north of the old city. Many years later, at great expense, Lexington Avenue was built between Third and Fourth Avenues and Madison Avenue between Fourth and Fifth, but in the modern city with the main course of traffic north and south there is great congestion on all the avenues, a condition which might have been avoided if the actual course of development had been foreseen by the commissioners.

The course of development at first followed the east side of the Island. The western side was so rough and rocky that even in 1850 it was thought that it would never be possible to use it for anything but goat pasture. It was perhaps fortunate that this was the case for it gave this section a longer time to ripen into a higher use. Since it was not built up until within the past forty years we find in this section modern apartment houses and dwellings instead of the old low tenements which were built in the seventies and eighties on First, Second, and Third Avenues.

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New York is almost entirely dependent on its transportation facilities. In Manhattan there are four main elevated lines on Second, Third, Sixth and Ninth Avenues and three main subway lines, Lexington Avenue, Seventh Avenue, and Broadway. Several of these lines extend through the Bronx, and the subways run through to Brooklyn by tunnels under the East River. The newest subway also connects with Queens both by bridge and tunnel. Surface trolley lines are of comparatively little importance as nobody has time to use them except for short distances. Several surface lines have been discontinued and motor busses substituted. All of the elevated and subway lines are disgracefully congested, and this in itself is having a perceptible influence in checking development along the most congested lines. The direction of future growth will depend very largely on the routes of new subway lines, since people will flock immediately to any section which offers some relief from the packing system on the present transit lines.

Manhattan Island is still of course the center not only of commerce and finance but of manufacturing. There are two main business districts, one the financial district with its focus at Broad and Wall Streets in the old city, and the other, the retail shopping district three miles north, with its focus at Fifth Avenue and 42nd Street. The financial district is very compact, occupying only a few blocks, intensively developed with skyscraper buildings. The shopping district covers a large area with distinct specialization. The more popular department stores are near 34th Street; the more exclusive shops are now on Fifth Avenue between 42nd and 59th Streets; the theatre district is on Broadway and side streets from 38th to 52nd Streets; while the automobile district runs from 52nd Street to 66th Street on Broadway. The shopping district has been moved several times. Twenty years ago the great department stores were on 14th and 23rd Streets, and the removal farther up town was a disaster to property owners on these streets. Million dollar land values dropped to less than half a million within five years. Now, however, these streets are coming back as wholesale and manufacturing centers. The wholesale districts and the garment manufacturing districts have gradually followed the shopping district up town and now extend as far north as 34th Street from Fourth Avenue across to Eighth.

The residence districts are quite sharply defined and are now being protected by a rigid zoning ordinance. The most exclusive and expensive residence section is still on upper Fifth Avenue along Central Park from 59th to 90th Streets. Just east is Park Avenue, a continuation of Fourth, with its high class apartment houses with apartments renting at from $8,000 to $20,000 a year. On the west side are Riverside Drive and West End Avenue.

South of 14th Street and east of the Bowery is the Lower East Side with its population of 1,000 and more to the acre usually living in five and six story brick tenements. Up town on the East Side around 110th and 116th Streets is Little Italy, also

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with a population of 1,000 to the acre. Above 125th Street in Harlem is the Negro section in which for blocks a white face is almost as unusual as in Central Africa. In the past the character of many of these districts has frequently changed, and it can readily be seen how such a change would affect the value of the land.

According to the records of the New York City Tax Department nearly 97 per cent of the available parcels of land in the borough of Manhattan are improved by building. Land has been valued for taxation apart from buildings only since 1904, so in tracing the value of any large area over a series of years it is always difficult to determine the land value apart from the value of the whole property. There are, however, a few parcels even in the heart of the city which have never been improved. For the purposes of our study of New York land values, nine of these parcels were chosen, practically at random. All of these parcels were in good business or residence section, and eight at least have increased in value at a far higher rate than has the gross land value of the borough Manhattan as a whole. We have estimated that since 1880 the value of all land in Manhattan has increased 250 per cent, while the combined value of these nine parcels in the same period has increased 400 per cent. In tracing each parcel an early sale for a stated consideration was usually taken as the starting point. The assessed valuation was determined for each subsequent year and the taxes computed. The records were searched and the actual amounts of the special assessments levied on each parcel were determined. Then interest at four per cent compounded annually was computed on the original base value and on each tax or special assessment payment. In this way the total cost of each parcel to date on a four per cent basis was determined. But since each separate computation began with a different base year the objection was made that the results of the computations were not comparable one with another. So a careful estimate of the value of each parcel was made for 1880, and the costs re-computed from that date, with the surprising result that the totals were only $25,000 short of the totals in the first computation, a difference of six-tenths of one per cent. The increase in the base value and interest almost exactly balanced the decrease in the total amount of taxes and assessments with interest. It is this second computation which I am giving you in chart form, (Chart I) reduced to a percentage basis. The 100 per cent line represents the value of each parcel in 1921. The solid color represents the value in 1880. The second section of the bar represents the taxes and assessments actually paid since 1880. The cross-hatched section is the interest on the base value and the final section of the bar is the interest on taxes and assessments. The net increment or decrement in each parcel is measured from the end of each bar to the 100 per cent line. In the first for example, we found a decrement of 171 per cent while in the second there was a net increment of eight per cent of the value in 1921 and in the seventh a net increment of fifteen per cent. All of the other

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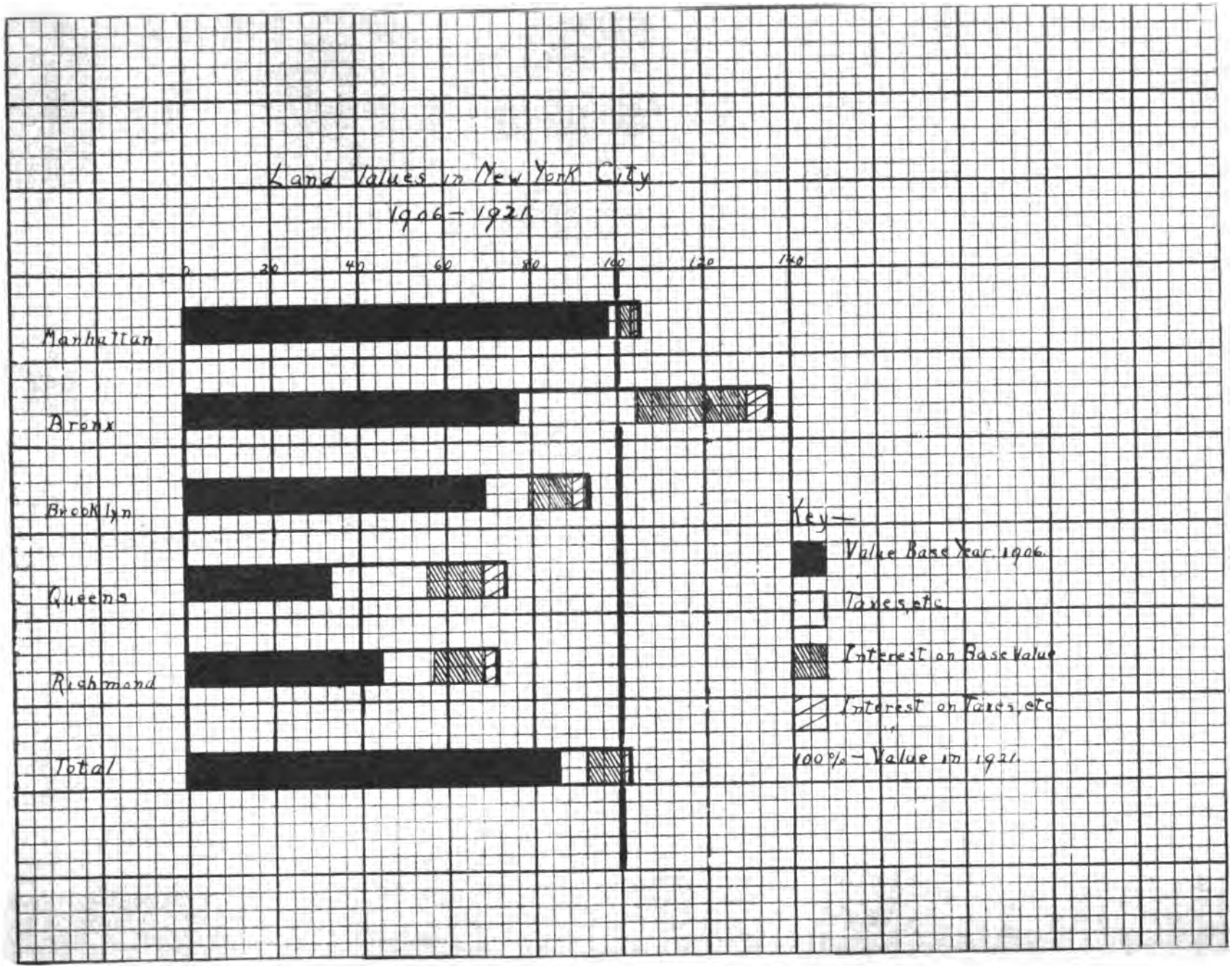

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parcels showed heavy losses as compared with a hypothetical four per cent investment.

The first of these parcels is located on Fourteenth Street near Fifth Avenue in the retail business district of 25 years ago. It is the last remaining portion of the estate of Henry Spingler, a New York merchant of Revolutionary times, who in 1788 bought several acres around what is now 14th Street, as a farm. The parcel comprises fifteen city lots and is occupied only by a dilapidated old stone mansion and a stable, relics of bygone splendor. In order to make full allowance for the use value of improvements, the carrying charges have been computed here on only 12 of the 15 lots, on the very liberal assumption that the use value of the house and stable has equalled the carrying charges on three lots. The actual figures in this case are: Value in 1880, $320,000; Taxes, $323,050; Interest on base value, $1,022,303; and Interest on Taxes, $299,799, making a total cost of $1,965,152 as compared with an estimated value in 1921 of $726,000. Twenty years ago before the removal of the retail trade, the property was probably worth $1,200,000.

The second parcel is a lot measuring 54 by 100 feet on Fifth Avenue above 39th Street, now valued at about $932,000. In 1845, John D. Wendell paid $8,000 for this and three other lots, making the proportional value of this parcel about $3,000. In 1880 it was worth about $75,000. The taxes paid since 1880 amount to $295,000 and the total cost with interest compounded at four per cent amounts to $850,000, so that here in the heart of the new retail district there has been a net increment of $82,000. In other words this vacant property, worth eleven times as much as in 1880 has been worth as an investment only slightly more than four per cent.

The next four parcels are located on upper Fifth Avenue opposite Central Park, near the residences of Carnegie, Frick, and Ex-Senator Clark. Here land, although still very valuable, has not increased in value materially in twenty years. The zoning ordinance now prohibits apartment houses in this section, and in New York the one family house, even for the very wealthy is rapidly passing. The seventh parcel is located on West 64th Street near Broadway, in the center of the automobile trade. It has increased in value very rapidly in the past ten years, and this accounts for the 15 per cent net increment. Parcel 8 is on Central Park West. It was more valuable ten years ago than at present. It is well located, but for some reason the early promise of fashionable development was not realized. The properties surrounding Central Park all participated in a tremendous boom when the Park was opened in the later fifties. The section which had been a waste of abandoned stone quarries and swamps, the camping ground of a horde of squatters, with their pigs, dogs, and chickens was bought in 1856 by the city and in 1858 was opened as a magnificent park. Within five years the assessed valuations

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in the three wards bounding the park rose from $26,000,000 to $47,000,000, and in another five years the valuation was $80,000,000. The city paid an average price of $7,800 an acre for the first section of the park from 59th Street to 106th Street. In 1859 it was decided to extend the park to 110th Street and this new section, more distant and originally far less valuable, cost the city $20,000 an acre. Lots on Fifth Avenue worth about $1,000 before 1850 were worth from $10,000 to $15,000 in 1860. After the Civil War there was another boom in Fifth Avenue lots and these same lots by 1870 were selling from $50,000 to $100,000. Then came the collapse after the panic of 1873. A parcel at the corner of 83rd Street which sold for $250,000 in 1872 sold again for $145,000 in 1874 and for $132,000 in 1878. Another lot which sold for $71,500 in 1871 was sold at foreclosure in 1875 for $43,500 and was sold again in 1878 for $26,000. But by 1880 the trend was again upward, and continued so until about 1903 when other exclusive residence sections began to attract some of the wealthy residents. This drift to other sections has left values of residence property at about the same figures as in the years from 1900 to 1905. The ninth parcel represented in the diagram is located on Riverside Drive between 109th Street and Cathedral Parkway. This property has steadily increased in value, but not rapidly enough to absorb its heavy carrying charges. It should perhaps be said that this parcel was sold last year for a price not stated, but known to be greatly in excess of the estimated value in our table. A large part of the sale price, however, was allowed to stand as a second mortgage, and in addition the former owners obtained for the purchaser a building loan of several hundred thousand dollars which now stands as the first mortgage against the property. This service, if rendered by such a firm as S.W. Straus & Co., would require a bonus of perhaps $150,000, so it is difficult to say how much of the consideration of this sale was the price of the land and how much was compensation for the financing service.

*The final bar in the chart represents the total value of the nine parcels, with the totals of the various items of cost reduced to a percentage basis. The 100 per cent point represents in this bar a present value of $5,057,000 and the total cost, $8,171,000. The value in 1880 was $1,012,500, and the taxes and assessments without interest, $1,916,000. In other words, if someone had purchased these nine tracts in 1880 and sold them in 1921, his actual cash outlay in the forty-one years would have been approximately $2,000,000, and his only income, aside from a few hundred dollars for the rental of bill board space, would have been $2,000,000, the difference between the cash outlay and the selling price. But when we consider that at four per cent compound interest money will double in eighteen years it is clear that if he had invested his original $1,012,500 in four per cent bonds and re-invested the interest at four per cent the present value of his estate would be just about $5,000,000, and in addition he would have saved the $2,000,000 which he paid in taxes and assessments.

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Taxation on his bonds may be disregarded, since even if his bonds were not non-taxable, the chance is very slight that they would have been taxed, as very little personal property in New York has ever been reached for purposes of taxation.

These properties were all ripe for improvement during practically the whole period of our study. How about the newer sections which have been developed more recently? The northern end of Manhattan Island, above the deep valley which cuts the ridge of hills at 125th Street, is a section which was in the main, waste land valuable only in anticipation of its future utilization as city land. Here we can trace the whole evolution of farm land into highly developed city property. In this whole section, the most valuable corner today is 181st Street and St. Nicholas Avenue on Washington Heights. Here there is a business center which would do credit to a very considerable town. The Washington Bridge carries 181st Street across the Harlem River to University Heights in the Bronx, and a subway station gives access to the express trains on the Seventh Avenue line. This whole section is built up with apartment houses for people of moderate means. In 1891 a tract of 38 acres including this corner was sold at auction by a syndicate organized by Henry Morgenthau. Our study of this tract covers the years from 1891 to 1921 and also the earlier period from 1850 to 1891. The auction sale of the whole tract immediately after its subdivision gave a good starting point for the computation of costs. The total price paid for the 411 lots was $1,490,000. In 1906 two years after the opening of the subway the land value was over $4,000,000 and in 1921, $9,000,000. This represents an increase in land value of 125 per cent in the 15 years 1906-1921. During the same period the whole of the Washington Heights Section increased in land value about 50 per cent and as we have seen the land value of the Borough of Manhattan as a whole remained practically stationary. In computing the carrying charges on this tract the assumption was made that any building erected would yield sufficient income to pay all carrying charges including interest on the parcel improved. The special assessments, however, were taken in full, because they were considered in the nature of a capital charge for the direct improvement of the property, one of the emerging costs which is usually directly reflected in increased value. During the thirty years since 1891 the owners of vacant land in this tract have paid $653,000 in taxes and the total amount of special assessments levied on the whole tract has been $481,000. Adding interest compounded at four per cent computed on the original cost and on the payments to the city, taking only that interest which can be considered as a charge on vacant land, we find that the total cost to the owners, not compensated by direct income has been $4,767,000, or 53 per cent of the present value. This, as we have seen, is a section which has developed with unusual rapidity from waste land to highly utilized city land.

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But even here there are 38 lots which still remained vacant in 1921. These lots in 1891 sold for $131,450. They are now worth $474,500. Their owners have paid $165,000 in taxes and $46,500 in special assessments, and perhaps other items of cost such as grading, removal of rocks, etc. Interest on the original cost and the known carrying charges brings the total cost through 1921 to $774,000 or 163 per cent of the actual value in that year.

It is interesting to note that even within this 38 acre tract estimates of future value increases in 1891 were far astray. The highest prices paid for lots were for those on Amsterdam Avenue overlooking the Harlem River. At present the most valuable land is two blocks west, and even aside from the subway the exact location of which could not have been anticipated by the original purchasers, the lots on Broadway two blocks still further west are now much more valuable than those on Amsterdam Avenue.

This tract had a very interesting history prior to 1891. In 1850 it was known as the Balzius Moore Farm and was valued for taxation at $8,000. Since vacant land was assessed very low at that time the farm may have been worth $24,000. In 1868, at the height of a land boom, the farm was purchased by a Civil War general, Daniel Butterfield, and a partner, for $330,000. They paid $50,000 in cash and gave mortgages for $280,000, on which they paid at least six per cent interest. In 1873 the boom collapsed, but General Butterfield and his partner held the land until 1879 when the mortgages were foreclosed and the property sold for $225,000. Assuming that the partners paid the charges levied against the property their losses were:- nine years interest on $280,000 or about $150,000; their whole equity of $50,000; Taxes amounting to $34,000 and special assessments of $63,000, a total loss in ten years of about $300,000. In 1880 the farm was sold to George Ehret, a wealthy brewer for $315,000, and he in turn sold it in 1883 to Edward Morgan, Governor of New York, for $450,000. Morgan's executors sold it in 1885 for $350,000 to Levi P. Morton and an associate. Morton, then Vice President of the United States, sold it to the Morgenthau syndicate in 1891 for $980,000. This syndicate surveyed and plotted the land and as we have seen sold it at auction for $1,490,000 in the same year. From 1868 to 1885 it is obvious that this tract used as a football of land speculation had brought financial ruin to two men and great loss to the estate of a third. Two others, both holding only a short time, gained in the speculation, but far less than the others lost. Mr. Morton holding the land for six years for rising prices more than doubled his money. The syndicate which subdivided the farm made a gross profit of $530,000 in one month on an actual cash investment of only $300,000. It is not known how much these operators paid for surveying and mapping, grading, advertising, and auctioneer's fess, but even though these expenses were heavy there was undoubtedly a considerable net profit in this unusually quick turnover.

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These parcels and tracts of land as we have seen have shared fully in the tremendous increases in value which have characterized the development of Manhattan Island. But as the values have increased the taxes and other socially necessary costs have also increased. Thus while the gross increments in value are in all cases very great they are largely and often entirely absorbed by the carrying charges, so that the net increments which do remain rarely amount to more than the accumulation of capital at a nominal rate of interest.

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LECTURE III.

Outlying Urban Land and Lot Auction Sales

It will be necessary later to return to the Borough of Manhattan, to illustrate some of the points in our more general discussion of land value increments and decrements, but for to-day I want to speak of the outlying urban land in New York which has in the past fifteen years been ripening into a higher use. In the case of much of this land perhaps it is not so much the ripening into a higher use as ripening into its only use. For in many sections in and about New York the land is distinctly sub-marginal from an agricultural point of view.

First, I will speak of the geography of the outlying boroughs of New York. As you may know, these outlying sections around New York were consolidated into the Greater City in 1898. New York now consists of five boroughs - Manhattan, the Bronx, Brooklyn, Queens and Richmond. We have already spoken of Manhattan. The Bronx is the only part of the city strictly on the mainland. It lies to the north of Manhattan and is separated from it by the Harlem River, a narrow stream which has been made navigable by dredging and canalization. There are many bridges across this river and two subway tunnels under it, making the Bronx now little more than an extension of Manhattan. In area it is about twice as large as Manhattan and it now has a population of about 800,000. Brooklyn lies to the south east of Manhattan on Long Island. The East River, a strait connecting Long Island Sound with New York Bay, separates Long Island from Manhattan Island and the Bronx. Three great bridges and two subway tunnels now connect Manhattan with Brooklyn. In area Brooklyn is three times as large as Manhattan and the two boroughs are about equal in population.

Queens, with its 116 square miles is by far the largest of the boroughs in area. It extends from the East River and Long Island Sound on the north to the Atlantic Ocean on the South, half surrounding the borough of Brooklyn. It is to a large extent still rural with much land which is still agricultural and not yet subdivided. The population has grown very rapidly within the past fifteen years until it has now over 400,000 inhabitants in several distinct city units such as Long Island City, Flushing, Jamaica and Rockaway. This growth has been stimulated by the building of two elevated railway lines connecting with the New York subways both by a tunnel and a bridge. Another tunnel has carried the Long Island Railroad under the East River and under Manhattan to the Pennsylvania Terminal, giving to all parts of Queens access to New York by fast electric suburban trains. Queens Boulevard, connecting with the Queensboro Bridge at the Plaza in Long Island City and running through to Jamaica, is a part of the best automobile route from Manhattan to the ocean, and has opened up large sections of Queens to motor traffic. It is not difficult to understand the rapid growth of the borough and it seems quite safe to predict a

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continuation of this growth. The Borough of Richmond comprises the whole of Staten Island, five miles down the bay from Manhattan and separated from Brooklyn by the Narrows, the channel connecting the upper bay with the lower bay and the ocean. It has as yet no rail connections with the other boroughs, and except for a fringe of population along the shore of New York Bay is still largely a waste of hills and salt marshes.

The northward development of the urban area of New York continued through the Bronx and, after the consolidation, the opening of three great parks, Van Cortlandt, Bronx and Pelham Bay greatly increased the attractiveness of this borough. The opening of the subway in 1905 and the extension of elevated lines seemed to make continued rapid development certain, but within recent years the rate of growth has been retarded. While it still has a healthy growth the expectations of fifteen years ago have not been realized. This slowing down of the rate of growth together with the increasing tax rate and increasing expense of street improvements has been disastrous to the owners of vacant land. To illustrate the difference between the investment value of vacant land in recent years and the investment value of similar land at an earlier period we have made a comparison between the tract on Washington Heights described in the preceding lecture, and a tract of about 90 acres in the Upper Bronx which still remains practically vacant.

The Washington Heights tract was purchased in 1868 for $330,000 and sold in 1891, twenty-three years later for $980,000. During that period the owners paid in taxes $91,000 and in special assessments $77,000. Interest compounded at 4% annually on all these payments brings the total cost to $1,093,500 or 112 per cent of its sale value in 1891. Thus if General Butterfield had been able to hold the property for twenty three years, the property while yielding less than 4 per cent interest would still have had some investment value.

The Bronx tract was purchased in 1894 for $313,000 and is still held by the estate of the purchaser. In 27 years the owner has actually paid $204,600 in taxes and $75,000 in special assessments. Interest compounded annually at 4 per cent brings the total cost to $1,290,000. The tract is now valued for taxation at $514,000, which is probably a liberal estimate of its value. The cost to the owners in actual cash is 115.2 per cent of its present value, while with the inclusion of interest it has cost the owners 251 per cent of its present value. The history of this tract, which is typical of vacant land in this section, illustrates the great costs under modern conditions of holding land while it is developing into a higher use. The owner was not holding the land out of use, for it was worthless for agriculture and not yet needed as urban land. In order to make the return equal to that of a four per cent investment the increase in land value should have been 300 per cent. Actually it increased in value only 64 per cent. In the next few years the cost will be even

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higher. The taxes are now about $14,000 a year. Special assessment levies have only begun, and it will still cost more than $1,000,000 and possibly $2,000,000 to open and pave streets and build sewers.

In order to avoid the heavy overhead cost of carrying vacant property, real estate operators in promoting new sub-divisions frequently sell the lots at auction. During the years from 1905 to 1913 such lot auctions were unusually frequent in New York. The lots were sold largely to people of relatively small means who bought either for speculation or with a view to future building. Whatever were the motives of the purchasers, conditions of development have forced the majority of them to hold their lots vacant for from eight to sixteen years, and it is interesting to see how they have fared from the investment point of view. A test was made by an intensive study of ten tracts which were sold between the years 1905 and 1913. Six of these were in the Bronx, three in Brooklyn, and one in Richmond. The history of these sales is shown in graphic form in Chart II.

The greatest of these sales was held in 1913. The tract sold was formerly the Morris Park race track, with some adjacent land, altogether about 250 acres. Tract No. 1 in Chart II. This was surveyed into 3019 lots. Since the sale was in accordance with a court order the seal of the State of New York was featured in all the advertising matter. The advertisements stated that the land would be sacrificed at unrestricted auction and 70 per cent could remain on mortgage. One advertisement states, "We know of $3,800,000,000 in New York State invested at from 3-1/2 to 4 per cent. If it were invested in Bronx real estate it would be obtaining 15 to 30 per cent interest per annum. Actual statistics show that to be the average increase in values. The assessed values in 1890 were $44,000,000, in 1904, $238,000,000 and in 1912, $617,000,000." How these figures can represent 15 to 30 per cent increase it is difficult to say, especially since these figures take no account of the changed ratio of assessed values to true values. Even as the figures stand, they represent average annual gross increases only between eleven and twelve per cent. Furthermore, they include all improvements, the assessed land value alone in 1912 being only $333,000,000. If after making this slight correction we take into account the actual costs in taxes and assessments we find that five to six per cent would be a liberal estimate of the actual return on Bronx vacant land during this period. Other advertisements called attention to the "Persistent, Insistent and Consistent" northerly growth of the city. Attention was called to selected parcels in other parts of the Bronx which had shown large increases in value and all the transit facilities, actual and proposed, were continually stressed. The sale continued for two weeks and the lots sold for prices totalling about $3,700,000 or an average price of $1217, a lot. At the date of the sale there were four houses on the whole tract. In 1921 there were still only forty lots improved and the assessed valuation of

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Auction Sales

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the whole tract was $2,742,000, nearly one million dollars less than the price paid at the auction in 1913. Not only was the actual value less, but in the eight years the owners had paid in taxes $489,000 and in special assessments $729,000. Counting interest at 4%, which was probably less than was actually paid on the mortgages, the total cost through 1921 was $6,375,000 or 231 per cent of the 1921 value. To make the case concrete, suppose John Smith to have bought two average lots at the auction, a plot 50 x 100 feet. The price was $2434, of which he paid $730 in cash and gave a mortgage for $1704. We will suppose that he withdrew the cash payment from a savings bank which had been paying him four per cent interest. In eight years the interest paid and foregone would amount to $1309. His taxes would have been $326, and special assessments $486. The lots have now cost him $4555 and they are worth to-day $1816.[1] Street improvements have only begun. If they are completed in ten more years the total cost of this property to John Smith before the lots are really ready for building will be about $10,000. This is the present value of some of the most desirable residence property in the Bronx today, that on University Avenue near New York University. To anyone familiar with Morris Park it seems highly improbable that anything approaching these values will be reached in this section in twice ten years.

To show that this hypothetical case is not out of the ordinary the following is an actual instance of similar loss in the Ogden Estate tract, number 5 on the chart. This property is directly across Washington Bridge from the Washington Heights tract discussed before. Shortly after that auction a man bought two lots in this tract from the original purchaser, paying for them $1800. He died soon after, leaving these lots to his widow as practically his whole estate. The widow borrowed $1600, giving a mortgage on the lots at 6 per cent. She still holds them and according to her own calculation they have cost her over $5000. She is now hesitating whether to continue this drain on her small salary or to let the lots go to foreclosure. They are valued for taxation now at just the amount of the mortgage, and she has been unable to find a purchaser at a higher figure.

Chart II needs little further discussion. The first six bars represent sales in the Bronx. They are distributed over the whole borough except the lower part which was all improved before 1905. The best showing is number 6, which is the nearest to the lower city and which is now over 70 per cent improved. Numbers 7, 8 and 9 represent sales in Brooklyn. Tracts 7 and 9 are now about half improved and are located in good residence sections which are developing rapidly. Tract 8 is far out in Brooklyn, an hour's ride

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1) A real estate dealer advertised as follows in the New York World of April 22, 1922: "I can sell 306 Bronx lots that averaged $1300 per lot in 1913 without improvements and a ten cent fare to Manhattan, today for an average price of $800 per lot, with sewers, sidewalks and curbs and a five cent fare to all parts of the Bronx, Brooklyn and New York City. Located in Morris Park, Bronx."

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on the subway from New York. Its greatest possibilities lie in the plans for the development of a new seaport on Jamaica Bay to relieve the congestion in the Hudson and East River piers. The tenth tract is in the Borough of Richmond. This also shows a very heavy loss. Its only hope lies in the proposed subway tunnel under the Narrows which will cut in half the travelling time to Manhattan.

These auction sales were all in boroughs which, as we shall see later, have shown healthy increases in land values and also in population. In a very few years all will be built up and become developed sections of New York City. The losses that have been suffered were evidently due to premature subdivision and over-valuation at the time of the sale. In view of the constantly increasing costs of ripening land for urban use, it is evident that owners of vacant land must reconcile themselves to a lower present value. The value of such land should be determined on a discount basis. When the cost of carrying vacant land is high the value of unimproved land not yet ready for use must be correspondingly low. As a city becomes older and more mature its rate of growth is likely to be lower than in the earlier years of its developments. If so, it will take longer now for a tract of undeveloped land to mature as urban land than it took at an earlier period for a similar tract to reach maturity. These changing conditions should be recognized and taken into consideration in the development of new land. In the light of the experience of the last eight years it is evident that the man who paid $2434 for his lots at Morris Park should have paid only about $900, assuming that the present valuation is justified. His land would then have doubled in value in the eight years and his investment would have yielded him about four per cent interest.

Recently in New York there has been a great revival of land auctions. It is reported that Joseph P. Day, the auctioneer, who sold Morris Park in 1913, sold $28,000,000 worth of lots in 1921. If his commission is the usual five per cent above the cost of advertising, it is evident that he received over a million dollars for his year's work. It will be interesting to watch some of the tracts sold recently to discover whether his powers of persuasion are still great enough to induce purchasers to pay $2434 for lots which will be worth $1800 in 1930.

Mr. Day himself is not ignorant of these matters. Some of his remarks in an address before a Y.M.C.A. class in real estate in 1907 are very illuminating. He first described the right kind of an auction sale "where the lots are properly developed and all improvements are in." Then to quote his own words:- "The wrong kind of lot sales at auction are the kind where tracts are suddenly opened up, a scraper run through, posts stuck in the ground to denote that this is such and such a street, no water pipes, gas sewer, curbs, sidewalks or anything else. And that kind of a sale, as a rule, has a brass band and a free lunch, to get your stomach and senses feeling good and then they hand you what we call a gold brick,

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because anyone that buys at that kind of a sale buys as a rule for a rise, or maybe to build, Let us say they buy for a rise. What is going to make the rise? It is the building of houses, buildings, along side or near them. Well, if people have no facilities for getting water, no sewer system, or if on a rainy day they have to walk in six inches of mud to get anywhere on account of no sidewalks, that is not going to attract them, no matter how poor they are. They would rather stay in their tenement quarters. And that answers the question of building. So every person as a rule, that buys a lot in an undeveloped section like that which is not fortunate enough to have another section build up to and make improvements in the neighborhood and make a demand for his property, he is stuck. Furthermore, the people who buy these lots are often poor, and if assessments are made for improvements they let the lots go. And then I maintain you are making an anemy of the purchaser." Mr. Day sold Morris Park six years after he made that address. He undoubtedly made some enemies there, but there were still plenty of purchasers left for his lots in 1921.

The history of the development of subdivisions around New York entirely aside from the auction business reveals many sordid stories of outright swindling, such as the selling of lots which did not exist and actual lots which were located in salt marshes which will not be reclaimed for a generation at least. Then there have been sharp practices in the sale of perfectly good lots such as an instance reported in the Real Estate Record and Guide for June 10, 1910. A group of promoters bought a large vacant block in the Bronx and petitioned the Board of Estimate to cut a new street through the property. As soon as their petition was granted they sold the lots on each side of the proposed new street, retaining to themselves the title to the land to be used for street purposes. When the street was completed the promoters collected from the city an award for the title to the street property of $42,441. The city then levied a special assessment of $45,339 on the adjoining property owners who had purchased of the promoters, to cover this award and expenses. This, of course, was all entirely within the law and the property owners had no recourse.

Aside from the loss to the purchasers resulting from the premature subdivision of land there is also frequently a social loss through the opening and paving of streets, the building of sewers and the extension of water mains far in advance of legitimate need. These improvements are expensive and the interest item on the original cost is material. Then the sidewalks and pavements deteriorate through neglect and when years later they are actually needed the work must be done all over again, this time at the expense of the city. In Morris Park there is even an extension of a street car line which still remains unused. Then in some cases there is social loss due to the premature withdrawal of land from agricultural use. This loss may readily be overestimated, however, since all urban land is a very small part of the total land area of the country. In many cases, too, this loss is counterbalanced by the use of vacant lots for gardening purposes.

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It may be admitted that the last few years have been unusually bad years for speculation in outlying vacant land. Not only have taxes increased to an unprecedented extent, but war conditions increased building costs, making it difficult to improve vacant land. Then immigration practically ceased for several years so that the rate of population growth in New York City was only about half as great in the decade 1910-1920 as in the previous decades. Nevertheless it is evident that the socially necessary costs of bringing agricultural land into urban use are much greater than prospective home builders have supposed them to be. Even under the most favorable conditions it appears that the holding of vacant land involves heavy costs, for which the owner can be compensated only by an extremely rapid appreciation in value, which can come only when the period of development is short. Premature subdivision, with a lengthening of the transition period from agricultural to urban use is certain to result in heavy loss.

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LECTURE IV

Increments and Decrements in Outlying Urban Land

In this lecture I shall speak more generally of land values in each of the outlying boroughs of New York and try to show what have been the underlying causes which in recent years have resulted in gains or losses to the owners of this great area of land which has been ripening into urban use. The total value of this outlying land is far less than the value of the highly improved land on the lower end of Manhattan Island, but in our study of urban land problems the course of development of these outlying areas has a more direct bearing on our real problems than has the development of those extremely high values in the business sections of Manhattan. The unique character of these high values is best understood by the astonishing fact that the land value of Manhattan Island with its 24 square miles is greater than the land value of all the remaining boroughs combined, with all of Chicago and all of Bostom added for good measure. As compared with agricultural land the value of the land on Manhattan Island is approximately equal to the acreage value of all the farm land in the State of Iowa, or of that in the States of New York and Wisconsin combined.

But Manhattan, as we have seen, has for fifteen years maintained practically stationary land values, and one may even venture to advance the theory that much of the land in this borough has reached its maximum of utilization, and that generally speaking sites on Manhattan Island will not be made more productive than they are today. It is possible that in the future it will be found more profitable to spread the business sections of New York out over a wider area, using land of lower rental value, than to bring about any more intensive use of a few strategic blocks. We have already noted this expansion in the retail shopping district. Twenty five years ago this district was confined to Broadway from Astor Place to 23rd Street, Fourteenth Street, Twenty-third Street and Fifth and Sixth Avenues between these streets. This whole area covered only about twenty blocks. Now the shopping district begins below 34th Street and extends for more than twenty blocks along Fifth Avenue alone, while John Wanamaker still remains, 26 blocks farther south, at Astor Place. Even the financial district is expanding. The New Curb Exchange was built two blocks west of Broadway, and several years ago the Woolworth Building and the Hudson Terminal Building were built north and west of the old financial section and the Whitehall Building at the extreme south on Battery Park. This expansion of business tends to increase values in the blocks newly utilized for business but it may tend at the same time to equalize values and keep all at a lower level. This expansion of business, and manufacturing as well, was encroaching on some of the most valuable residence property in Manhattan until these residence sections were protected by zoning laws, and manufacturing in particular has encroached on tenement districts, so that the population of Manhattan is no longer increasing. The

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growth of the future is bound to be greatest in the outlying boroughs. And as these outlying districts grow, new business centers are developing which in themselves have the appearance of the business districts of an important city. Brooklyn has for many years had an important shopping center of its own with at least three large department stores which compare favorably with those in the vicinity of 34th Street in Manhattan. In the Bronx the most important business center is at the corner of 149th Street and 3rd Avenue, with many smaller centers of local business scattered over the borough where before the consolidation, small suburban villages were located. In Queens there are four very distinct centers of population. The most important is Long Island City with many important factories, comparable in itself to a manufacturing city like Grand Rapids, Michigan. Jamaica is a large residence suburb of about 100,000 population with its own business center, connected with New York by two main lines of railroad, an elevated line and surface cars. Flushing on Long Island Sound, also has its own center and is more like a distinct small city than any other part of Greater New York. Finally Rockaway, a summer city built along the ocean front, also has its individuality different from that of any other part of New York. The Borough of Richmond as I have said before has a population of only a hundred thousand. Here there is no appearance of a city, only a succession of villages each with its own groceries and small dry goods stores.

Each of these smaller urban centers in the different boroughs has its own character and their rapid growth may mean that a decentralizing process is setting in, which may eventually diminish the relative importance of Manhattan in the economic life of the city. Manhattan has already lost its political predominance, for Brooklyn alone now polls a heavier vote than Manhattan, and a Brooklyn man is mayor of the city. This same process is going on in other cities. Even though absorbed in the larger city in name, these satellite cities retain their separate identity just as do other satellite cities which remain outside politically. And as these new centers grow each with its industries, stores, banks and theatres, with improved transportation more and more equalizing the accessibility of different sections, may there not be a tendency to break down much of that high differential which now exists between the great business centers on the one hand and these smaller centers on the other?

From the last lecture I may have conveyed the impression that land values in the outlying boroughs of New York City were not increasing. If so, I want to correct that impression today. In addition to our intensive study of vacant tracts and tracts sold at auction a study was also made of the actual increases in land value, both gross and net, in the five boroughs, taking each borough as a whole. The New York City Tax Department has reported in each year since 1910 the number and total valuation of vacant parcels in each borough. By obtaining the ratio in each year

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since 1910 between the value of vacant land and the value of all land and projecting this series of ratios back to 1906, on the assumption that the trend of these ratios before 1910 was similar to the trend since that date, we established a basis for an estimate of the carrying charges on the land in each borough. The value of the land was then estimated for 1906 and for 1921 by a comparison of sales with assessed valuations. The Tax Department never totalled the special assessments by boroughs so it was necessary to go to the original records and add these assessments by boroughs and by years. As in the more intensive studies, all special assessments were included as carrying charges, while taxes and four per cent compound interest on the 1906 value and on the tax and assessment payments, were computed only in proportion to the value of vacant land. In Manhattan these carrying charges were relatively small, since there was comparatively little vacant land. They were sufficient however to turn a gross increment in value of 1.4 per cent into a net decrement of 4.8 per cent of the land value in 1921. In the Bronx the gross increment was 23.6 per cent, but here the vacant land was a considerable factor, and the various carrying charges turned this increment into a net decrement of 35.1 per cent of the value in 1921. In all other boroughs however there was a net decrement after allowing for all special assessments, and carrying charges on vacant land. In Brooklyn this increment was only 7.8 per cent in the whole sixteen years, but in Queens it was 26.5 per cent and in Richmond 28.6 per cent. In view of the heavy loss on the tract in Richmond which was sold at auction in 1906 it is rather surprising to find the highest net increment in this borough. But in the first place it must be admitted that for Richmond the data for making the estimates of value both in 1906 and in 1921 was very unsatisfactory, and there may be a considerable error in the estimates. Then the increases in value have been very largely in the improved sections of the borough. Accordingly, the valuation of the vacant land, much of it in hills and marshes, is very low and since the carrying charges are computed on the value of vacant land the cost is proportionately much lower than in Queens where there is a large amount of vacant land having great potential value. Then in Richmond special assessments in sixteen years amounted to less than five per cent of the present value of the land as compared with ten per cent in Queens and 16.6 per cent in the Bronx.

The actual amounts levied in special assessments in the five boroughs are particularly interesting as these special assessments represent direct costs of the development of land. In the Bronx special assessments amounted to $60,281,000 in Brooklyn $51,798,000 in Queens $34,316,000, in Manhattan $19,719,000 and in Richmond $3,198,000. In Manhattan special assessments are now relatively small, for the sewers are all constructed and all the streets are paved except a few short streets in the extreme northern end. The heaviest assessments in the next few years will probably be levied in Queens with its large area ready for development. If Richmond is ever fully developed, the cost will be unusually heavy, for there will be such engineering problems to be solved as grading on the hills and filling and draining in the marshes. Since in

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Queens the rate of increase in land value was so high a separate study was made here by wards in order to locate the area having the greatest net increment. The greatest gross increment was in the Second Ward, known as Newtown which lies between Long Island City and Jamaica along the railway and Queens Boulevard. The land value of this ward increased in sixteen years from $25,000,000 to $86,000,000. But here the carrying charges brought the total cost to $63,000,000 thus reducing the net increment to $23,000,000. In Long Island City, land values increased from $34,400,000 to $80,500,000 but the total cost as computed amounted to $76,500,000, leaving only $5,000,000 as a net increment. In Jamaica also, the costs absorbed the greater part of the gross increment of value, although here as in Newtown the holding of land yielded a material investment return above costs. The greatest net increments however were not in the most rapidly developing wards but in the remote wards of Flushing and Rockaway. In these wards the gross increase was not as rapid as in Newtown and Jamaica, but there were very few special assessments and the taxes and interest charges on vacant land were relatively low. In Flushing the total net increment above costs was 39 per cent and in Rockaway 49 per cent. In Rockaway this is all the more remarkable because the increase in value took place almost entirely in the years from 1906 to 1911. In the last ten years values in Rockaway have been practically stationary and those who purchased in 1910 and 1911 have suffered heavy loss. In Flushing we can see the process of inflation of the value of large areas of vacant land far in advance of its development. Probably most of this land is now held for speculation. There is still enough vacant land nearer New York to accomodate the increase of population for many years to come, and recent purchasers at present prices will probably find it rather expensive to hold this land until it is ripe for urban use.

We have been considering the actual figures of gross and net increments of value in New York urban land. What then is the lesson in more general terms? Whether there has been a net gain or a net loss one fact stands out clearly in the study of every parcel and tract of land investigated and in the studies of the various boroughs. That is the staggering, and ever increasing cost incident to the ownership of land. Take first the item of taxes. Before the Civil War the tax rate in New York had averaged about one per cent over a period of twenty years. Land was assessed at about fifty per cent of its true value. The actual tax rate was therefore about one half of one per cent. Even in 1906 the rate on true value was only 1.12 per cent, but in 1921 it was 2.77 on the assessed value in Manhattan and 2.83 in the Bronx. Even correcting on our assumption that land is assessed at 95 per cent of its value in Manhattan the rate on true value is at least 2.63 or more than five times as high as in the years when John Jacob Astor was buying land in advance of the growth of the city. And there is no indication that the present tax rate will be materially reduced. The cost of administering the affairs of the city has increased and the city is constantly expanding its

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economic activities and its public service. The costs of the schools, the police and fire departments are continually increasing, and nobody wants these services curtailed. In the old days little attention was paid to the cleaning of streets. Now people demand clean streets and also demand that pavements be kept in repair. In the winter, snow must be removed. A moderately heavy snow fall now costs the city over half a million dollars, and the cost of a heavy snow like that of February, 1921, runs into millions. The subways have been built by the city, and interest must be paid on subway bonds. The cost of maintaining the parks and public buildings is constantly increasing, although the present administration has economized by cutting down the Public Library appropriations. The taxes on vacant land constitute a very material part of the revenue of the city. In Greater New York there were in 1920, 192,021 vacant parcels of real estate valued for taxation at $549,000,000. Since a parcel is considered improved if there is any building whatever on the land, it is evident that there must be many thousand more parcels which are practically vacant. On the first of the vacant parcels described in my second lecture there is a house which in 1920 was valued for taxation at $2,000. It is really worthless, as it would have to be torn down before the land could be profitably used, but from the point of view of the tax department this is an improved parcel. But even on the figures of the tax department, the owners of vacant land pay $16,000,000 a year in taxes. In Queens alone vacant land pays over $4,000,000 a year or 20 per cent of the total revenue of the borough. In the Bronx it pays 16.5 per cent, in Richmond 14.2 per cent, and in Brooklyn 5.6 per cent. In Manhattan, however, with only three per cent of the parcels vacant, the vacant land pays only 2.2 per cent of the taxes. This same situation undoubtedly obtains in other cities and certainly the tax rates in all cities have greatly increased.

Now as to special assessments. Before 1860 the cost of sewers and pavements was absurdly low. There were very few assessments amounting to more than $100 a lot. The total amount of the assessments levied on the parcel on Fifth Avenue near 39th Street since 1845 has been only $1031 or about $4000 for a block front and this included paving and sewers. One of the Fifth Avenue vacant parcels, the whole block front between 95th and 96th Streets in which improvements were made a few years later, has paid $10,355 in assessments since 1856. The Riverside Drive parcel, also a block front, on which most of the assessments were levied from 1880 to 1900 has paid $21,689 since 1880. In Morris Park since 1913 the sewers along have frequently cost $400 a lot or $3200 a block front and the other improvements are hardly started. These costs can be little if any lower elsewhere, for the greater part of the cost is in labor and in materials which are no more expensive in New York than elsewhere.

There are other costs of land holding which cannot easily be computed, but which often amount to a considerable sum. The owner may pay for draining, grading, fencing, or clearing the land. He

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may be called upon for contributions for local improvements privately made by property owners in the neighborhood.

Then as to the interest charges. As we have seen the owner very often pays at least six per cent interest on a large part of the purchase price, and he could easily obtain four per cent in an alternative investment. Even though we may not believe that a person is justified in obtaining interest simply for holding vacant land, still from the owner's point of view interest is an actual cost. In the outlying sections around New York it has not been, until very recently, at least, socially desirable for building to take place more rapidly. Therefore the owner has not been anti-social in holding land out of use. Even assuming that he paid more than the land was worth in the first place, there were still the tax and assessment payments, which he was obliged to pay. If he had deposited the same amounts in a savings bank he would have received four per cent compound interest. Under our present system of land tenure somebody had to hold this land, so it does not seem unreasonable to allow at least four per cent interest as a part of the carrying charges on vacant land. This means then that the annual cost of carrying vacant land is from 6 1/2 to 7 per cent plus the actual amounts of special assessments. In the ten auction sale tracts the payments for special assessments have been slightly more than the taxes since the dates of sale. This would indicate that during the period of development the total carrying cost under present conditions is at least ten per cent a year. If therefore vacant land is to pay as an investment it must increase in value ten per cent a year which means that it must double in value in eight years.

In all this discussion of increments and decrements the changing value of the dollar has been left out of consideration. In the course of the investigation, however, some such computations were made. Since the value of land in dollars was falling while the value of the dollar was also falling, land values at the 1913 price level were for three years during and after the war below fifty per cent of their value in 1913. The carrying charges moreover increased rapidly during this period, so if our computations were entirely expressed in terms of the 1913 dollar the increments even in Queens would be changed to decrements, and the losses elsewhere would be staggering. This, however, is hardly fair, because the extreme fluctuations in the general price were only temporary, and with a return to normal conditions land values will undoubtedly recover their losses.

But even aside from the changing price level we have seen that vacant land does not have real investment value. For short periods in a rapidly rising real estate market speculation in vacant land is often profitable, but where values are stationary or only increasing at a moderate rate, the costs of holding land will turn an apparent profit into a loss. The studies of vacant lots in Manhattan, of large tracts in the newer sections of the city, and of the outlying boroughs, taking each borough as a whole, all point to the same conclusion, and show the fallacy in the popular assumption that large profits are made by holding out of use land which is urgently needed for the development of the city.

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LECTURE V.

The Rent of Land and the Cost of Housing.

The value of land is fundamentally determined by its economic rent. Since economic rent is the actual or potential income attributable to land, the value of land is, in the absence of other considerations, the capitalized value of the economic rent. When the value of land is made the basis of direct taxation, the economic rent is divided between the owner and the government. Thus what we speak of as value is simply the owner's rent capitalized. The value of land is determined therefore not only by its actual or potential income, but by the prevailing rate of interest, on the basis of which the rent is capitalized. I have already spoken of the influence of taxation on land values, but now we can determine more accurately how great this influence is. Suppose we take the value of the land as V, then the owner's rent is this value multiplied by the prevailing rate of interest or Vi. Then the Government's share of the rent may be represented by Vt, or the value multiplied by the tax rate. The total economic rent is then Vi plus Vt. Then let us take the value which the land would have if it were not taxed at all, as U or the untaxed value. Then Ui is the economic rent. We now have the equation Vi + Vt = Ui from which we get $U = \frac{V(i + t)}{(i)}$.[1] Assuming for the sake of simplicity that land is assessed at its true value and assuming that the prevailing interest rate is 5 per cent, we have then in New York in 1921, V equal to $3,295,000,000; i equal to .05 and t equal to .0277, we find that the untaxed value of the land in Manhattan in 1921 was $3,295,000,000 multiplied by $\frac{7.77}{5}$ or $5,120,000,000. Correcting this on the basis of a 95 per cent assessment the untaxed value is $5,300,000,000.

Now by the same process with a correction for the difference in the ratio of assessed valuation, the untaxed value of the same land in 1906 was $4,170,000,000. In other words, if no taxes at all had been imposed and all other factors had remained the same, Manhattan land values instead of increasing less than two per cent in sixteen years would have increased 27 per cent in the same period.

This shows that in Manhattan the land has been taxed so high in the past sixteen years as to absorb practically the whole net increment in value. A further increase in the tax rate would further depress values, and, as we know, a tax which would absorb the whole rental value of the land would be equivalent to complete confiscation. It would, however, be very difficult to absorb the whole rental value of the land simply by increasing the tax rate. This can be shown by a modification of the formula given above.

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1) This formula is taken from a study now in preparation by Mr. C.B. Thompson of Columbia University.

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Suppose a single tax administration in its effort to take the full rental value of the land imposes a tax of five per cent on land with exemption of improvements. Let us suppose that U, the untaxed value, remains constant. Then since $U = \frac{\sqrt{(i+t)}}{(i)}$, $V = \frac{(i)}{(i+t)} U$, or $5,300,000,000 multiplied by $\frac{5}{5+5}$ or 1/2. The taxed value would, therefore, be reduced to $2,650,000,000 and the yield of the tax would be only $132,500,000 as compared with the present tax yield on land and buildings of $151,500,000. A tax of ten per cent on land values would cause a reduction in value to $1,770,000,000 and would yield only $25,000,000 more than the present tax on land and buildings.

It is evident, however, that in New York, the single tax on land values, if the difficulties of collection could be overcome, would yield more revenue than is produced by the present rate of taxation on land and buildings. Assuming that the prevailing rate of interest is five per cent, the total economic rent according to our formula is $256,100,000 in Manhattan, $69,600,000 in Brooklyn, $28,600,000 in the Bronx, $24,300,000 in Queens and $4,600,000 in Richmond. The present tax yield on land and buildings is $151,500,000 in Manhattan, $63,600,000 in Brooklyn, $21,800,000 in the Bronx, $18,400,000 in Queens and $3,300,000 in Richmond. This gives as the ratios of the present tax to the economic rent, 59 in Manhattan, 91 In Brooklyn, 76.5 in the Bronx, 76 in Queens and 73 in Richmond. For the whole city the economic rent in 1921 was $383,100,000 and the tax yield $258,700,000 a ratio of 67.5. If the prevailing interest rate is taken as four per cent the economic rent would still have been greater than the 1921 taxes in all the boroughs with the exception of Brooklyn, in which borough there would have been a deficit of about $3,000,000.

The economic rent of vacant land is potential, determined by the anticipated rental of the land as it will later be improved. As we have seen, very little vacant land yields interest on the price at which it is held through net increments in value. Nor does improved land always yield an income equal to its full economic rent. The improvement must be adapted to the land improved. The construction and operation of buildings is a business in itself and one which requires a high type of ability and judgment. In every city a very large proportion of the buildings are either inadequate, obsolete, misplaced or improperly designed for the purpose for which they were built. No such building would yield rentals or personal satisfactions sufficient to pay for operating expenses including interest and depreciation and in addition give to the owner the economic rent of the land. For example there is the "tax payer" building, a one or two story brick or frame building, built temporarily on land which would support a block of ten or more stories. There are old buildings which should be replaced by new buildings; there are residences surrounded by factories or office buildings, and massive stone fronts on store buildings which need large windows for display purposes.

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In the past, buildings have been constructed without fully counting the cost of operation. In particular the factor of depreciation or amortization has been overlooked. It has been assumed, consciously or unconsciously, that the increase in the value of the land would counterbalance the depreciation of the building. In the past the increase was frequently sufficient to take care of this factor. Columbia College has moved two or three times, and in each case is said to have profited by moving, as the land on which the buildings stood had become more valuable than the original cost of the land and buildings together. But as we have seen these land increments cannot be relied upon in the future.

It is clear that a knowledge of the probable costs and income from land is of great significance to the land owner and the prospective home builder, but how about the vast majority in a city like New York who will always remain tenants, and who may have no desire to own land? Many people of wealth prefer apartments to houses and do not desire the responsibilities of real estate management. But more important is the bearing upon the problem of housing the working class. As a writer in the New Republic expresses it (Editorial, Sept. 8, 1920). "The great majority of our working population are no longer in condition to satisfy their housing requirements by the traditional method of self help. They cannot go long distances from their work. Their margins of time and income are too slender. Home ownership is out of the question .....There might be a solution in the cooperative ownership of multiple dwellings, but that presupposes a spirit of cooperation which can not simply be evoked out of our old individualistic scheme of life, but can only be evolved with time." The worker must buy his housing as he can afford it.

Under the present high carrying charges on land and buildings and the high cost of building materials, not only is the workingman unable to own his own home but in large cities one or even two family houses cannot be built to rent within his rent paying capacity. The only solution is the multi-family house in which the operating cost per family is reduced and which of course involves the use of a smaller area of land per family. If for example a six room house is built on land worth $2500, which would probably be the cheapest improved land available, five percent interest on land value would amount to about $2.00 per room per month or $12 per month for the house. In a fairly good residence district on the west side of Manhattan near 23rd Street, there is a six story tenement of a good type which is occupied by families of approximately the same income as those who would live in a six room cottage in the Bronx or far out in Queens or Brooklyn. Here the land is valued at $30,000. There are 21 rooms and six baths on each floor, Therefore on a five per cent basis the interest on land amounts to one dollar per room per month.

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In view of the agitation for a different system of land taxation and land tenure it is very important to learn just what effect the proposed changes would have upon the cost of housing. Very little material of this sort has ever been collected, but I have data in regard to two apartment houses in New York which seem to throw some light on the problem. The first of these buildings is the tenement building referred to above. Here the land value is $30,000 and the building cost was $55,000. The costs are computed both for 1914, and also estimated on the basis of present costs on a similar building constructed at the building cost of 1921. Interest in both years is computed at 6 per cent.

	1914 Cost Per Room per month	1914 Per Cent	1921 Cost Per Room per month	1921 Per Cent
Interest on land cost	1.25	15.	1.25	8.
Interest on Building cost	2.25	27.	5.-	33.
Taxes (Land and Building)	1.-	12.	1.50	10.
Fuel	.75	9.	1.50	10.
Salaries and Management	.60	7.+	1.15	7.
Repairs	.55	7.	1.-	7.
Insurance, Water, Gas, Sundries	.25	3.	.45	3.
Lost rent 7 1/2%	.50	6.	1.-	7.
Amortization	1.10	13.	2.25	15.
	$ 8.25	100.	$ 15.10	100.

The other house is a five story tenement built in the Bronx on a lot fifty feet wide, valued at $10,000. The building cost in 1914 was $35,000.

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	1914		1921	
	Cost Per Room per month	Per Cent	Cost Per Room per month	Per Cent
Interest on Land	.70	8	.70	5.
Interest on building	2.50	29	5.-	33.
Taxes on land and Building	.90	10	1.50	10.
Fuel	.75	9	1.50	10.
Wages, management, etc.	.80	9.5	1.35	9.
Insurance, Water, Gas, etc.	.50	6.	.75	4.
Repairs	.80	9.5	1.50	10.
Lost rent	.40	5.-	.40	3.
Amortization	1.20	14.-	2.40	16.
	$8.55	100.-	$15.10	100.-

These figures are of interest from several points of view. For one thing we see that interest on the land and the taxes on land and building in the second table amounted to $1.60 in 1914 and $2.20 in 1921. If we assume that all land is owned by the city and leased for its full rental value with the exception of buildings from taxation, this land rent would evidently be substituted for these items of interest and taxes. From our formula $Ui = V(i+t) = \$678$ in 1914 or $783 in 1921. Dividing this by 1056 the number of room months we have $.64 as the economic rent per room per month in 1914 and $.74 in 1921. This would appear to indicate a monthly saving in costs of from $1.00 to $1.50 per room. But in 1914 many apartments in this house rented for $7 per room per month. Depreciation or amortization was not figured. The same would probably be true in 1921. At least few owners would figure enough depreciation to reduce the excessive costs of building in 1921. The owners consciously or unconsciously still count on the value increment of the land to cover the depreciation of the building. If they did not have this increment, depreciation would have to be figured in full, and in all probability there would be no saving in costs which could by any possibility result in lowering the rentals of apartments.

In any case it is not at all certain that any saving which could be effected in costs would be passed on to the tenant. Relief to the tenant would be more likely to come through a stimulation of building which would increase the number of apartments and thus by competition reduce rents. But here the increased risk incidental to uncertainty of future land rents, would make builders hesitate before investing their money in buildings on

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leased land. There might be a tendency to erect more buildings of an inferior type which would yield a high return for a few years and which would not in themselves tend to increase the rental value of the land by making the neighborhood more desirable. In view of the heavy costs of land holding it is probable that a large part of the land not ready for improvement would not be leased at all, thus forcing the city to assume the carrying charges.

The speculations as to future conditions as a result of possible changes in the economic system are interesting but not very profitable. It is clear, however, that whatever may be the imperfections and injustices of our present system, there are also dangers and pitfalls in the proposed systems and it is not at all certain that the change would be for the better.

The ground lease system as between landowner and building owner is quite usual in English cities. This ground lease system approaches actual land ownership by the tenant when the lease is for 999 years at a very moderate rental, but there are also short time leases, which may be renewed at an adjusted rental. This system is also quite common in New York. Many of the great land owning estates and trusts such as the Sailor's Snug Harbor, Trinity Church, the Lorillard Estate, the Astor Estate, Columbia College, and others have leased their land holdings, usually through a twenty-one year renewable ground lease. This lease system offers a very interesting field of investigation. The Sailor's Snug Harbor is a home for retired sailors, now located on Staten Island, where they own a tract of several hundred acres with an unusually find and complete group of institutional buildings. The income of the institution comes largely from ground leases on several blocks in the heart of the old retail district of New York on both sides of Broadway and extending west to Fifth Avenue. This land land has been leased by the trustees of the institution on 21 year ground leases since 1827. The first leases of the Broadway lots were for rentals of around $90 a year. At the first renewal these rents were increased to $350 a year. At the last renewal the ground rents averaged $4,000 to $5,000 a lot.

This trust and also Trinity Church and the Lorillard estate which are also located in this part of the city, are by some held at least partly responsible for the removal of the business center of New York farther up town. The restrictions of the ground lease system, and the refusal of the trustees to improve property on their own account, resulted in a shortage of buildings adapted to modern business conditions. Many of the buildings in this section were from fifty to a hundred years old and still they could not be replaced by new buildings. The result was that the whole business center moved bodily a mile and a half north.

This explanation of the move is very interesting but there is also the undoubted fact that the new location of retail business is far better than the old location. The best residence sections were already still farther to the north and the Grand Central railway terminal was a Forty-Second Street. Later the great

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Pennsylvania Terminal was located at Thirty-third Street and this with the development of subways, including the Hudson Tube to Jersey City, Hoboken and Newark, gives to the new business section a strategic advantage which the old section could never have had.

In this course of lectures I have tried to present the most important findings of a year of research. I am aware that I have only dipped into the available material here and there. No great problems have been solved, but I do feel that these researches are worth continuing, and that at the present time this preliminary collecting of facts is more important than the ambitious development of plans for changes in our system of land tenure and taxation without a broad basis of fact.

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